marantz®

Model CR401 User Guide

CD Receiver

CLASS 1 LASER PRODUCT
KLASSE 1 LASER PRODUKT
I.H.T. IEC 825

COMPACT disc DIGITAL AUDIO

ENGLISH

WARRANTY
For warranty information, contact your local Marantz distributor.

RETAIN YOUR PURCHASE RECEIPT
Your purchase receipt is your permanent record of a valuable purchase. It should be kept in a safe place to be referred to as necessary for insurance purposes or when corresponding with Marantz.

IMPORTANT
When seeking warranty service, it is the responsibility of the consumer to establish proof and date of purchase. Your purchase receipt or invoice is adequate for such proof.

FOR U.K. ONLY
This undertaking is in addition to a consumer's statutory rights and does not affect those rights in any way.

FRANÇAIS

GARANTIE
Pour des informations sur la garantie, contacter le distributeur local Marantz.

CONSERVER L'ATTESTATION D'ACHAT
L'attestation d'achat est la preuve permanente d'un achat de valeur. La conserver en lieu sur pour s'y reporter aux fins d'obtention d'une couverture d'assurance ou dans le cadre de correspondances avec Marantz.

IMPORTANT
Pour l'obtention d'un service couvert par la garantie, il incombe au client d'établir la preuve de l'achat et d'en corroborer la date. Le reçu ou la facture constituent des preuves suffisantes.

DEUTSCH

GARANTIE
Bei Garantiefragen wenden Sie sich bitte an Ihren Marantz-Händler.

HEBEN SIE IHRE QUITTING GUT AUF
Die Quittung dient Ihnen als bleibende Unterlage für Ihren wertvollen Einkauf Das Aufbewahren der Quittung ist wichtig, da die darin enthaltenen Angaben für Versicherungswecke oder bei Korrespondenz mit Marantz angeführt werden müssen.

WICHTIG!
Bei Garantiefragen muß der Kunde eine Kaufunterlage mit Kaufdatum vorlegen. Ihren Quittung oder Rechnung ist als Unterlage ausreichend.

NEDERLANDS

GARANTIE
Voor inlichtingen omtrent garantie dient u zich tot uw plaatselijke Marantz.

UW KWITANTIE, KASSABON E.D. BEWAREN
Uw kwitantie, kassabon e.d. vormen uw bewijs van aankoop van een waardevol artikel en dienen op een veilige plaats bewaard te worden voor evt, verwijzing bijv, in verbend met verzekering of bij correspondentie met Marantz.

BELANGRIJK
Bij een evt, beroep op de garantie is het de verantwoordelijkheid van de consument een gedateerd bewijs van aankoop te tonen. Uw kassabon of factuurzijn voldoende bewijs.

ESPAÑOL

GARANTIA
Para obtener información acerca de la garantia póngase en contacto con su distribuidor Marantz.

GUARDE SU RECIBO DE COMPRA
Su recibo de compra es su prueba permanente de haber adquirido un aparato de valor, Este recibo deberá guardarlo en un lugar seguro y utilizarlo como referencia cuando tenga que hacer uso del seguro o se ponga en contacto con Marantz.

IMPORTANTE
Cuando solicite el servicio otorgado por la garantia el usuario tiene la responsabilidad de demonstrar cuando efectuó la compra. En este caso, su recibo de compra será la prueba apropiada.

ITALIANO

GARANZIA
L'apparecchio è coperto da una garanzia di buon funzionamento della durata di un anno, o del periodo previsto dalla legge, a partire dalla data di acquisto comprovata da un documento attestante il nominativo del Rivenditore e la data di vendita. La garanzia sarà prestata con la sostituzione o la riparazione gratuita delle parti difettose.
Non sono coperti da garanzia difetti derivanti da uso improprio, errata installazione, manutenzione effettuata da personale non autorizzato o, comunque, da circostanze che non possano riferirsi a difetti di funzionamento dell'apparecchio. Sono inoltre esclusi dalla garanzia gli interventi inerenti l'installazione e l'allacciamento agli impianti di alimentazione.
Gli apparecchi verranno riparati presso i nostri Centri di Assistenza Autorizzati. Le spese ed i rischi di trasporto sono a carico del cliente.
La casa costruttrice declina ogni responsabilità per danni diretti o indiretti provocati dalla inosservanza delle prescrizioni di installazione, uso e manutenzione dettagliate nel presente manuale o per guasti dovuti ad uso continuato a fini professionali.

SVENSKA

GARANTI
För information om garantin, kontakta Marantz lokalagent.

SPAR KVITTOT
Kvittot är ett inköpsbevis på en värdefull vara. Det skall förvaras säkert och hänvisas till vid försäkringsfall eller vidkorrespondens mod Marantz.

VIKTIGT
Fö att garantin skall gälla är det kundens sak att framställa bevis och datum om köpet. Kvitto eller faktura är tillräokligt bevis fö detta.

CE MARKING

CE **English**
The CR401 is in conformity with the EMC directive and low-voltage directive.

CE **Français**
Le CR401 est conforme à la directive EMC et à la directive sur les basses tensions.

CE **Deutsch**
Das Modell CR401 entspricht den EMC-Richtlinien und den Richtlinien für Niederspannungsgeräte.

CE **Nederlands**
De CR401 voldoet aan de EMC eisen en de vereisten voor laag-voltage.

CE **Español**
El CR401 está de acuerdo con las normas EMC y las relacionadas con baja tensión.

CE **Italiano**
Il CR401 è conforme alle direttive CEE ed a quelle per i bassi voltaggi.

CE **Svenska**
CR401 är tillverkad i enlighet med EMC direktiven och direktiven för lågvoltsutrusning.

ENGLISH:
CAUTION – USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

FINNISH:
VAROITUS! Laitteen käyttäminen muulla kuin tässä käyttöohjeessa mainitulla tavalla saattaa altistaa käyttäjän turvallisuusluokan 1 ylittävuälle näkymättömälle lasersäteilylle.

SWEDISH:
VARNING! Om apparaten används påannat sätt än vad som beskrivs 1 denna bruksanvisning kan användaren utsättas för osynlig laserstrålning som overskrider gränsen för laserklass 1 .

WARNINGS FOR LASER RADIATION

CAUTION : INVISIBLE LASER RADIATION WHEN OPEN. DO NOT STARE INTO BEAM.

DANGER : INVISIBLE LASER RADIATION WHEN OPEN. AVOID DIRECT EXPOSURE TO BEAM.

VARO! : AVATTAESSA JA SUOJALUKITUS OHITETTAESSA OLET ALTTIINANAKYMÄTTÖMÄALLE LASERSÄTEILYLLE. ÄLÄ KATSO SÄTEESEEN.

VARNING! : OSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD OCH SPÄRREN ÄR URKOPPLAD. BETRAKTA EJ STRALEN.

English

WARNINGS

- Do not expose the equipment to rain or moisture.
- Do not remove the cover from the equipment.
- Do not insert anything into the equipment through the ventilation holes.
- Do not handle the mains cord with wet hands.
- Do not cover the ventilation with any items such as tablecloths, newspapers, curtains, etc.
- No naked flame sources, such as lighted candles, should be placed on the equipment.
- When disposing of used batteries, please comply with governmental regulations or environmental public instruction's rules that apply in your country or area.
- Make a space of about 0.2 meter around the unit.
- No objects filled with liquids, such as vases, shall be placed on the apparatus.
- When the switch is in the OFF position, the equipment is not completely switched off from MAINS.
- The Socket-Outlet shall be installed near the equipment and shall be easily accessible.

Français

AVERTISSEMENTS

- Ne pas exposer l'appareil à la pluie ni à l'humidité.
- Ne pas essayer de retirer le boîtier de l'appareil.
- Ne rien insérer dans l'appareil par les orifices de ventilation.
- Ne pas manipuler le cordon d'alimentation avec les mains mouillées.
- Ne pas recouvrir les ouïes de ventilation avec un objet quelconque comme une nappe, un journal, un rideau, etc.
- Ne placer aucune source de flamme nue, comme une bougie allumée, sur l'appareil.
- Pour mettre au rebut les piles usées, respecter les lois gouvernementales ou les règlements officiels concernant l'environnement qui s'appliquent à votre pays ou région.
- Veiller à ce qu'aucun objet ne soit à moins de 0,2 mètre des côtés de l'appareil.
- Aucun objet rempli de liquide, un vase par exemple, ne doit être placé sur l'appareil.
- Lorsque l'interrupteur est sur la position OFF, l'appareil n'est pas complètement déconnecté du SECTEUR (MAINS).
- La prise électrique doit se trouver près de l'appareil et être facilement accessible.

Deutsch

WARNHINWEISE

- Das Gerät nicht Regen oder Feuchtigkeit aussetzen.
- Die Abdeckung nicht vom Gerät abnehmen.
- Keine Gegenstände durch die Belüftungsschlitze stecken.
- Das Netzkabel nicht mit feuchten oder nassen Händen anfassen.
- Decken Sie die Lüftungsöffnungen nicht mit einem Tischtuch, einer Zeitung, einem Vorhang usw. ab.
- Es dürfen keine Gegenstände mit offener Flamme, wie etwa brennende Kerzen, auf dem Gerät aufgestellt werden.
- Beachten Sie bei der Entsorgung der verbrauchten Batterien alle geltenden lokalen und überregionalen Regelungen.
- Auf allen Geräteseiten muß ein Zwischenraum von ungefähr 0,2 meter vorhanden sein.
- Auf das Gerät dürfen keine mit Flüssigkeiten gefüllte Behälter, wie etwa eine Vase, gestellt werden.
- Wenn der Schalter ausgeschaltet ist (OFF-Position), ist das Gerät nicht vollständig vom Stromnetz (MAINS) abgetrennt.
- Die Netzsteckdose muss sich in der Nähe des Gerätes befinden, und ein unbehinderter Zugang dazu muss jederzeit gewährleistet sein.

Nederlands

WAARSCHUWINGEN

- Stel het apparaat niet bloot aan regen of vocht.
- Verwijder de afdekplaat van het apparaat niet.
- Duw niets door de ventilatieopeningen in het apparaat.
- Raak het netsnoer niet met natte handen aan.
- Bedek de ventilatieopeningen niet met enige voorwerpen, zoals tafelkleden, kranten, gordijnen, enz.
- Plaats geen brandende voorwerpen, zoals kaarsen, op het apparaat.
- Volg bij het weggooien van verbruikte batterijen de overheidswetgeving of milieuvoorschriften op die van kracht zijn in het land of de regio waarin u zich bevindt.
- Zorg dat er 0,2 meter vrije ruimte rond het toestel is.
- Plaats geen voorwerpen met een vloeistof erin, zoals een bloemenvaas, op het apparaat.
- Als de schakelaar op OFF staat, is het apparaat niet volledig losgekoppeld van de netspanning (MAINS).
- Het stopcontact dient in de buurt van het apparaat te zitten en eenvoudig bereikbaar te zijn.

Español

ADVERTENCIAS

- No exponga el equipo a la lluvia ni a la humedad.
- No extraiga la tapa del equipo.
- No introduzca nada en el interior del equipo a través de los orificios de ventilación.
- No maneje el cable de alimentación con las manos mojadas.
- No cubra la ventilación con objetos como manteles, periódicos, cortinas, etc.
- No deben colocarse sobre el equipo elementos con fuego, por ejemplo velas encendidas.
- Cuando se eliminen baterías usadas, deben cumplirse las reglamentaciones oficiales o las normas de protección medioambiental aplicables en su país o en su zona.
- Deje un espacio de unos 0,2 metro alrededor de la unidad.
- No se deben colocar sobre el aparato recipientes que contengan líquidos, como por ejemplo jarrones.
- Cuando el interruptor está en la posición OFF, el equipo no está completamente desconectado de la alimentación MAINS.
- La toma de corriente se debe instalar cerca del equipo y ser de fácil acceso.

Italiano

AVVERTENZE

- Non esporre l'apparecchio alla pioggia o all'umidità.
- Non rimuovere il coperchio dell'apparecchio.
- Non introdurre oggetti all'interno dell'apparecchio attraverso i fori di ventilazione.
- Non toccare il cavo di alimentazione con le mani bagnate.
- Non coprire le fessure di ventilazione con tovaglie, giornali, tende od oggetti analoghi.
- Non posare sull'apparecchio sorgenti di fiamme scoperte quali candele accese.
- Smaltire le pile usate in conformità alle norme governative o disposizioni ambientali vigenti nel proprio paese o zona.
- Lasciare 0,2 metro liberi tutto intorno l'unità.
- Non mettere sull'apparecchiatura alcun contenitore di liquido, come ad esempio dei vasi.
- Quando l'interruttore è nella posizione OFF, l'apparecchiatura non è completamente scollegata da MAINS.
- La presa elettrica dovrebbe essere installata in prossimità dell'apparecchio ed essere facilmente accessibile.

Svenska

VARNINGAR

- Utsätt inte utrustningen för regn eller fukt.
- Ta inte bort utrustningens hölje.
- För inte in föremål i utrustningen genom ventilationshålen.
- Hantera inte nätsladden med våta händer.
- Täck inte för ventilationsöppningarna med några föremål som till exempel bordsdukar, dagstidningar, gardiner e.d.
- Inga föremål med öppen låga, som till exempel tända stearinljus, bör placeras på utrustningen.
- Följ de lagar och miljöskyddsråd som gäller i det land eller område där du bor när du gör dig av med batterier.
- Se till att det finns omkring 0,2 meter fri plats runt omkring enheten.
- Inga objekt som är fyllda med någon vätska, till exempel blomstervaser, bör placeras på apparaten.
- Även om strömbrytaren står i det avstängda läget OFF, så är utrustningen inte helt bortkopplad från det elektriska nätet (MAINS).
- Uttaget ska vara installerat nära utrustningen och vara lättillgängligt.

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FEATURES

ENGLISH

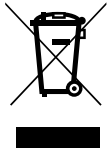
AMP
- 30W/Ch into 6 ohms (1kHz, 10%)
- Tone Direct
- Tone Control for Treble and Bass
- 3 Audio Inputs and 2 Outputs for Tape, MD, DVD

CD
- Playback CD-DA and MP3 CDs
- Optical Digital Out

Tuner
- AM/FM 40 Channels, Group Presets

General
- Audio Timer
- Sleep Timer
- Display Dimmer

A NOTE ABOUT RECYCLING



This product's packaging materials are recyclable and can be reused. This product and the accessories packed together are the applicable product to the WEEE directive except batteries.
Please dispose of any materials in accordance with your local recycling regulations.
When discarding the unit, comply with your local rules or regulations.
Batteries should never be thrown away or incinerated but disposed of in accordance with your local regulations concerning chemical wastes.

BEFORE USE

This section must be read before any connection is made to the mains supply.

■ Equipment mains working setting

Your Marantz product has been prepared to comply with the household power and safety requirements that exist in your area.
CR401 can be powered by 230V AC only.

■ Copyright

Recording and playback of any material may require consent. For further information refer to the following:

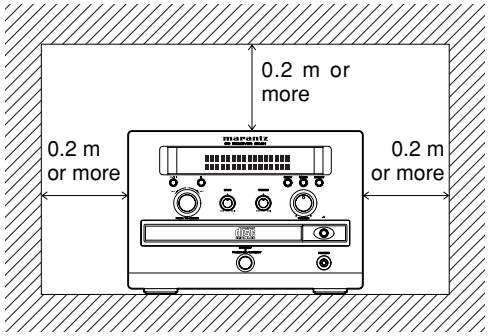
– Copyright Act 1956
– Dramatic and Musical Performers Act 1958
– Performers Protection Acts 1963 and 1972
– Any subsequent statutory enactments and orders

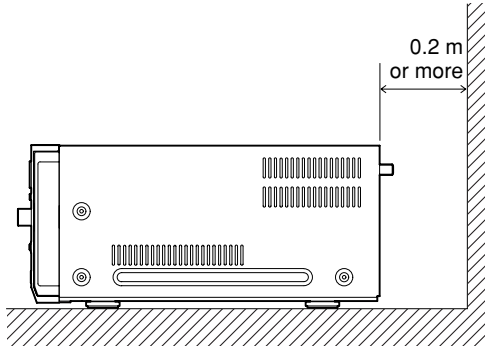
■ Do not locate in the following places

To ensure long-lasting use, do not locate the CR401 where:

- Exposed to direct sunlight.
- Near to sources of heat such as heaters.
- Highly humid or poorly ventilated.
- Dusty.
- Subjected to mechanical vibrations.
- On wobbly, inclined or otherwise unstable surfaces
- Radiated heat is blocked such as in cramped audio racks.

To ensure proper heat radiation, ensure the below clearance from walls and other equipment.





Noise or disturbance of the picture may be generated if this unit or any other electronic equipment using microprocessors is used near a tuner or TV.
If this happens, take the following steps:

- Install this unit as far as possible from the tuner or TV.
- Set the antenna wires from the tuner or TV away from this unit's mains cord and input/output connection cords.
- Noise or disturbance tends to occur particularly when using indoor antennas or 300 Ω/ohms feeder wires. We recommend using outdoor antennas and 75 Ω/ohms coaxial cables.

Note

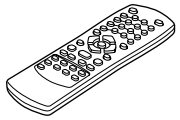
For heat dispersal, do not install this equipment in a confined space such as a book case or similar unit.

■ Do Not Touch Hot Spots During and Immediately After Use

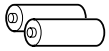
During and immediately after use, the CR401 is hot in areas other than the controls and rear panel connection jacks. Do not touch hot spots and especially the top panel. Contact with hot areas can cause burns.

■ Accessories

- Remote control unit (RC601CR) x 1



- Size "AAA" batteries x 2



- AM loop antenna x 1

- FM indoor antenna x 1

- User Guide x 1
- Registration Card x 1

■ ABOUT DISCS

Playable discs

COMPACT disc DIGITAL AUDIO	**Audio CD (CD-DA)**
COMPACT disc DIGITAL AUDIO Recordable COMPACT disc DIGITAL AUDIO ReWritable	**CD-R/CD-RW** Finalized CD-R and CD-RW discs recorded in the CD-DA format, MP3 format can be played with the unit.

* Finalize is the process to make a CD-R/CD-RW playable for players (not recorders)

* Some discs may not be able to be played depending on condition of the discs and recording software.

Structure of audio CD

Audio CDs contain music tracks only.
You can play them in conventional style through a stereo system, using the keys on the remote control and/or front panel.

About playing copy-controlled CDs

Some copy-controlled CDs may not conform to official CD standards. They are special discs and may not play on the CR401.

Discs made on personal computers

Discs made on personal computers, including those of a compatible format, may not work properly in the CR401 because of incorrect settings in the disc burning software. Check the manual supplied with your disc burning software for additional compatibility information.

MP3 compatibility

- MP3 discs must be ISO 9660 Level 1 or Level 2, Joliet compliant. Supported formats: Mode 1, Mode 2.
- Folders can be up to eight levels deep.
- MP3 files must be MPEG-1/MPEG-2 Audio Layer 3 format with a sampling rate of between 16 kHz and 48 kHz and a bit-rate of between 32 kbps and 320 kbps (128 kbps or 192 kbps recommended). Incompatible files cannot be played.
- Fixed bit-rate MP3 files are recommended, however, variable bit-rate (VBR) MP3 files between 8 kbps and 320 kbps are supported (Playing times may display incor-rectly).
- MP3 files must have a ".mp3" or ".MP3" file name extension. MP3 files without the proper extension will not be recognized. To prevent noise and malfunction, do not use these extensions for other types of files.
- The CR401 supports up to 500 MP3 files and up to 200 folders per disc. (In this case, Disc and File names contain 30 characters and Folder names contain 20 characters.) Files and folders in excess of this cannot be played. Note that if the file and folder structure is very complicated, the CR401 may not be able to read or play all of the MP3 files on the disc. If the disc, folder or file names contain many characters, the CR401 may not support 500 MP3 files.
- Disc names may contain up to 30 characters. File and folder names may contain up to 60 characters.
- The maximum time that can be displayed for a single track is 99 minutes and 59 seconds.
- The remaining time cannot be displayed when playing MP3 files.
- Multisession discs are supported, however, some multisession discs may take a long time to load and some may not load at all. When burning CDs we recommend that you use a single session (disc-at-once), and select "Disc Close."
- The ID3 tag version 1.0 is supported.

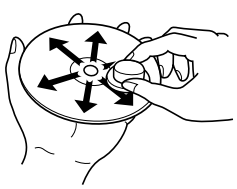
Notes

- With CD-ROM, CD-R, and CD-RW discs that contain many files and folders, and files other than MP3s, it may take a long time to read the disc. We recommend that you include only MP3 files on your discs, use about 20 folders, and limit folder nesting to three levels deep.
- In this manual, MP3 files are referred to as tracks.

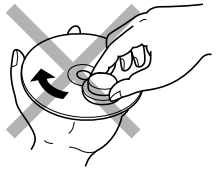
■ Notes about the discs

*** Handle the discs carefully so as not to scratch their surfaces.**

*** Keep the surfaces of the discs clean at all times.**
When cleaning the surfaces of discs, always be sure to use the special cleaner and wipe the surfaces in the directions shown in the figure below.

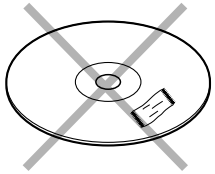


- Wipe the surface radially from the center.

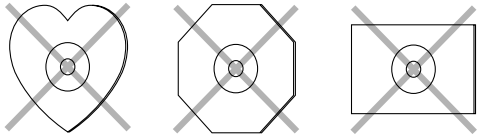


- Do not wipe the surface in the circumferential direction.

*** Do not attach pieces of paper or stickers to the label surfaces of the discs.**
When a disc has a piece of plastic tape or rental CD label with paste protruding from the edge or when a disc still bears traces of sticky tape or adhesive labels, do not attempt to play it. If such a disc is played on the CD player, you may find that you cannot remove it or that some other kind of malfunctioning may occur.



*** Do not use discs which come in special shapes.**
Do not attempt to play heart-shaped or octagonal discs or discs with any other special shapes. You may find that you cannot remove them or that some other kind of malfunctioning may occur in the player.



*** Use discs which satisfy the CD standards such as those with the "CD logo" or "COMPACT DISC DIGITAL AUDIO" mark on their disc label surfaces.**
No guarantees are made for playback if discs which do not satisfy the appropriate CD standards are used.
Similarly, no guarantees are made for their sound quality even if it is possible to play such discs.

*** To protect your discs from damage, avoid placing them in the following locations.**

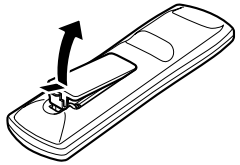
- Where they will be exposed to direct sunlight or where they will be close to a heater or other heat-radiating appliance
- Where the humidity level is high or it is very dusty
- Near a window or other such location where they may be exposed to rain

*** Get into the habit of putting the discs back in their cases after use.**

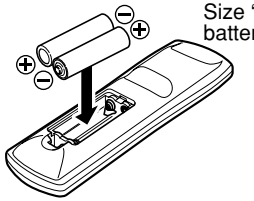
■ Loading batteries

Before using the supplied remote control unit for the first time, load the batteries in the remote control unit. The batteries provided are used to verify the operations of the remote control unit only.

1. Take hold of the tab on the battery cover which is found on the back side of the remote control unit, and pull it up.

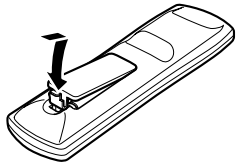


2. Take load the two new size “AAA” batteries inside the battery compartment while taking care to align their polarities correctly with the polarity markings (⊕ with ⊕ and ⊖ with ⊖).



Size “AAA” (SUM-4) batteries x 2

3. Push the battery cover down in the direction of the arrow to close it.



Notes on batteries:

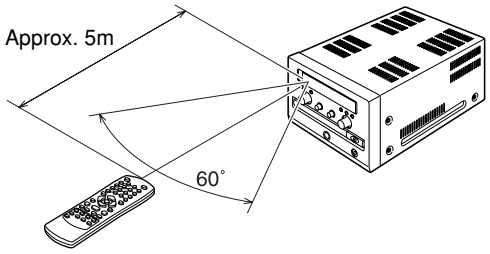
- Replace the batteries with new ones if the set does not operate even when the remote control unit is operated nearby the set. (The included battery is only for verifying operation.)
- To prevent damage or leakage of battery fluid:
  – Do not use a new battery together with an old one.
  – Do not use two different types of batteries.
  – Do not short-circuit, disassemble, heat or dispose of batteries in flames.
- If the battery fluid should leak, carefully wipe the fluid off the inside of the battery compartment and insert new batteries.

■ Operating range of the remote control unit

- Point the remote control unit at the remote sensor on the main unit as shown on the diagram.
- The remote control unit can be used from a straight distance of approximately 5 meters from the main unit, but this distance will be shorter if there are obstacles in the way or if the remote control unit is not pointed directly at the remote sensor.
- The remote control unit can be operated at a horizontal angle of up to 30 degrees with respect to the remote sensor.

Notes

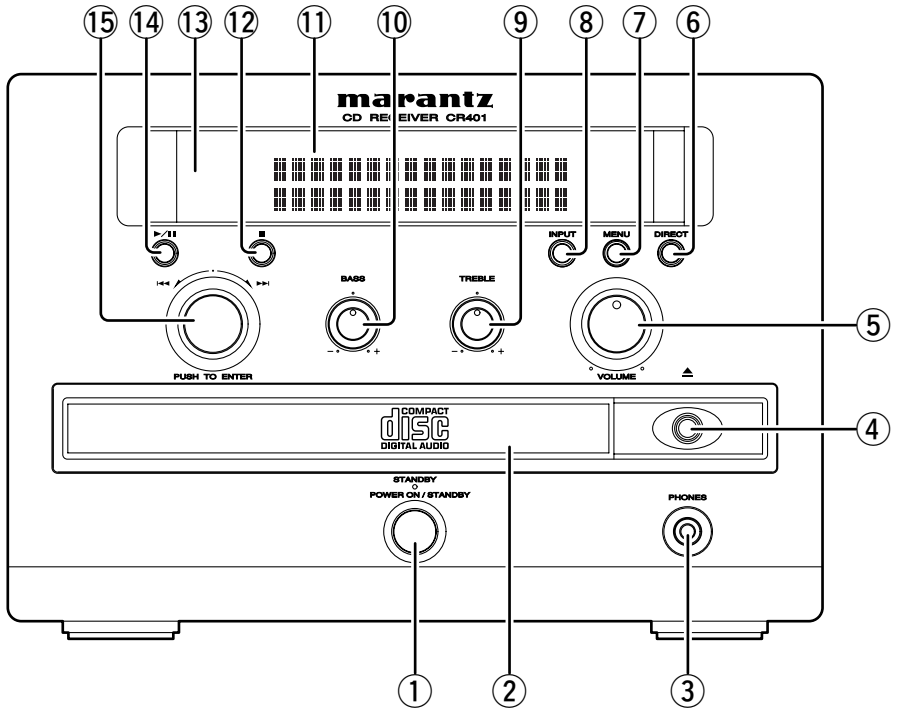
- It may be difficult to operate the remote control unit if the remote sensor is exposed to direct sunlight or strong artificial light.
- Do not press buttons on the main unit and remote control unit simultaneously. Doing so may result in malfunction.
- Neon signs or other devices emitting pulse-type noise nearby may result in malfunction, so keep the set as far away from such devices as possible.



RC601CR

PART NAME AND FUNCTIONS

FRONT PANEL



① POWER ON/STANDBY button

Press to turn power ON and press again to switch to STANDBY mode.

② Disc tray

③ PHONES jack

For connecting stereo headphones. When the headphones are connected to this jack, the speaker sound is turned off.

④ OPEN/CLOSE ⏏ button

Press this button to open and close the disc tray.

Note

If you press the OPEN/CLOSE ⏏ button in except CD mode, the sound source is changed to CD mode automatically.

⑤ Master VOLUME Knob

To increase or decrease sound level. To increase the sound level turn clockwise, and to decrease turn counter-clockwise

⑥ DIRECT button

Used to select "Tone Direct On" or "Tone Direct Off."

⑦ MENU button

Displays the Tuner menu.

⑧ INPUT button

Used to select sound sources: CD, FM, AM, TAPE, MD or DVD.

⑨ Tone Control TREBLE

Adjusts the Treble sound while the Tone Direct Off is selected.

⑩ Tone Control BASS

Adjusts the Bass sound while the Tone Direct Off is selected.

⑪ Display

⑫ STOP ■ button

This is used to stop the CD playback.

⑬ IR SENSOR

⑭ PLAY/PAUSE ►/II button

This is used to start CD playback or pause CD playback.

Note

If you press the PLAY/PAUSE ►/II button in except CD mode, the sound source is changed to CD mode automatically.

⑮ Easy JOG PUSH TO ENTER

CD Mode

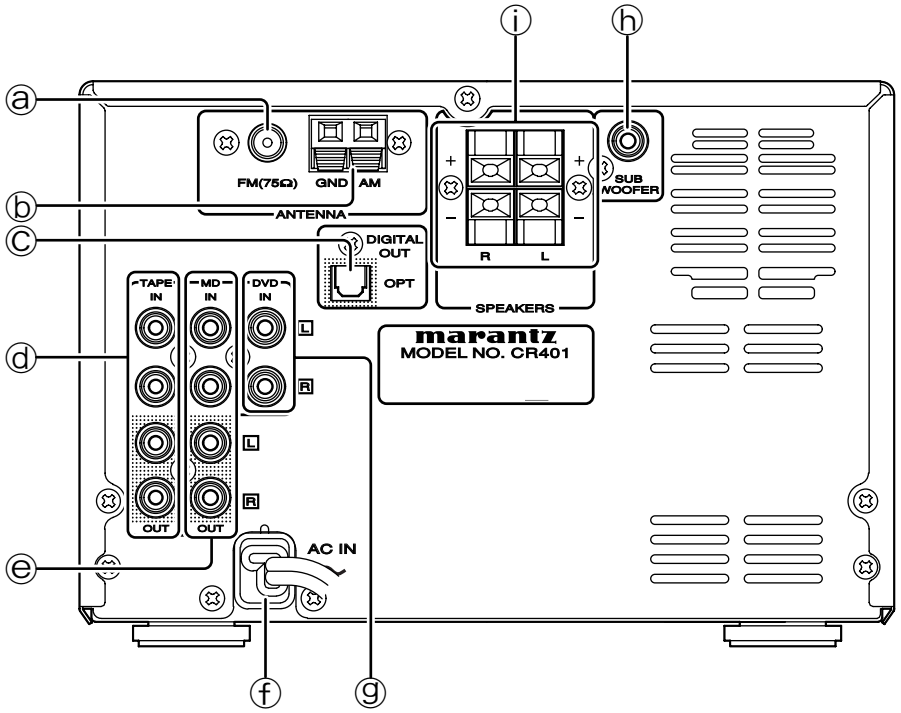
Preceding or subsequent tracks can be searched (tracks can be skipped) by turning the jog dial clockwise or counterclockwise.
Push the this knob during play back CD, jump to the next track.

Tuner Mode:

This knob is used in conjunction with the MENU button, and is used to select and determine the operation mode.
Also, this knob is used for the TUNING/PRESET search.
In the tuning mode, the reception frequency is tuned up or down. Turning the control in the clockwise direction tunes the frequency up. Tuning the control in the counterclockwise direction tunes the reception frequency down.
In the preset mode, the selection of the preset channel is moved up or down. The auto tuning operation cannot be used when in this mode.

PART NAME AND FUNCTIONS

REAR PANEL



ⓐ Antenna Terminal for FM Tuner (75 ohms)

Connect an external FM antenna with a coaxial cable, or a cable network FM source.

ⓑ Antenna Terminal for AM Tuner (AM, GND)

Connect the supplied AM loop antenna. Use the terminals marked “AM” and “GND”. The supplied AM loop antenna will provide good AM reception in most areas. Position the loop antenna until you hear the best reception.

ⓒ Optical Digital Out Jack (CD)

CD signals during playback are output digitally from this optical jack.

ⓓ TAPE IN/OUT Jacks

Connect the IN jacks to the output jacks of Tape recorder and the OUT jacks to Tape recoder input jacks.

ⓔ MD IN/OUT Jacks

Connect the IN jacks to the output jacks of MD or CD Recoder and the OUT jacks to MD or CD Recorder input jacks.

ⓕ AC Power cable

Connect to an AC power outlet. CR401 to be powered by AC230V 50Hz.

ⓖ DVD IN Jacks

Connect the IN jacks to the output jacks of DVD player.

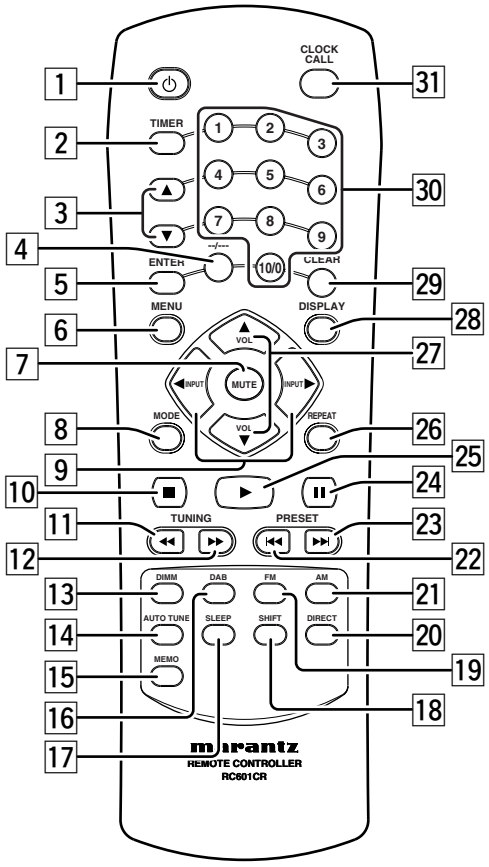
ⓗ Subwoofer Preout Jack

Connect to a component speaker input of an active subwoofer.

ⓘ Speaker terminals

Connect the speaker cord , observing the and polarity of the cord and terminals.

REMOTE CONTROL



1 ⏻ STANDBY/ON button

Press to turn power ON and press again to switch to STANDBY mode.

2 TIMER button

Used to set the timers.

3 ▲▼ button

Used to set the timers.
Used to select the MENU mode (UP/DOWN CURSOR KEY)

4 --/--- button

Used to select the two or three digits CD tracks.

5 ENTER button

Used to set the timers/clock and the menu in tuner/CD mode.

6 MENU button

Used to enter or exit menu mode

7 MUTE button

Used to mute the CR401.

8 MODE button

Used to set Random Play or Memory Play in CD mode.
Used to select the stereo mode or mono mode when a FM stereo broadcast is received.

9 INPUT ◄► button

Used to select sound sources.

10 STOP ■ button

Used to stop the CD playback.

11 ◄◄ button

Used to search backward when CD playback, or to select tuning when the radio used.

12 ►► button

Used to search forward when CD playback, or to select tuning when the radio used.

13 DIMM button

The display's brightness switches (in three levels) each time this button is pressed.

14 AUTO TUNE button

When pressed in the FM mode, receivable FM stations are automatically stored in the preset memory in order starting from preset channel A1.

15 MEMO button

Frequencies and station names can be stored in the memory. When this button is pressed, the "CH" indicator on the display flashes for 10 seconds.
Use the SHIFT button and the Preset channel buttons during this time to designate the desired preset channel.

16 DAB button

This button does not function on CR401.

17 SLEEP button

Used with the Sleep Timer function.

18 SHIFT button

Used to select the memory groups, A (1 ~ 10), B (1 ~ 10), ... D (1 ~ 10).

19 FM button

Used to select FM tuner.

20 DIRECT button

Used to select "Tone Direct On" or "Tone Direct Off."

21 AM button

Used to select AM tuner.

22 ⏮ button

Used to select the previous track when CD playback, or to select presets when the radio used.

23 ⏭ button

Used to select the next track when CD playback, or to select presets when the radio used.

24 PAUSE ⏸ button

Used to pause CD playback.

25 PLAY ► button

Used to select the CD mode and start the CD playback.

Note

If you press the PLAY ► button in except CD mode, the sound source is changed to CD mode automatically.

26 REPEAT button

Used with repeat playback.

27 VOLUME ▲▼ button

Used to set the volume.

28 DISPLAY button

Used to select the display mode.

29 CLEAR button

Used with memory playback.

30 Nurmeric (ten keypad) button

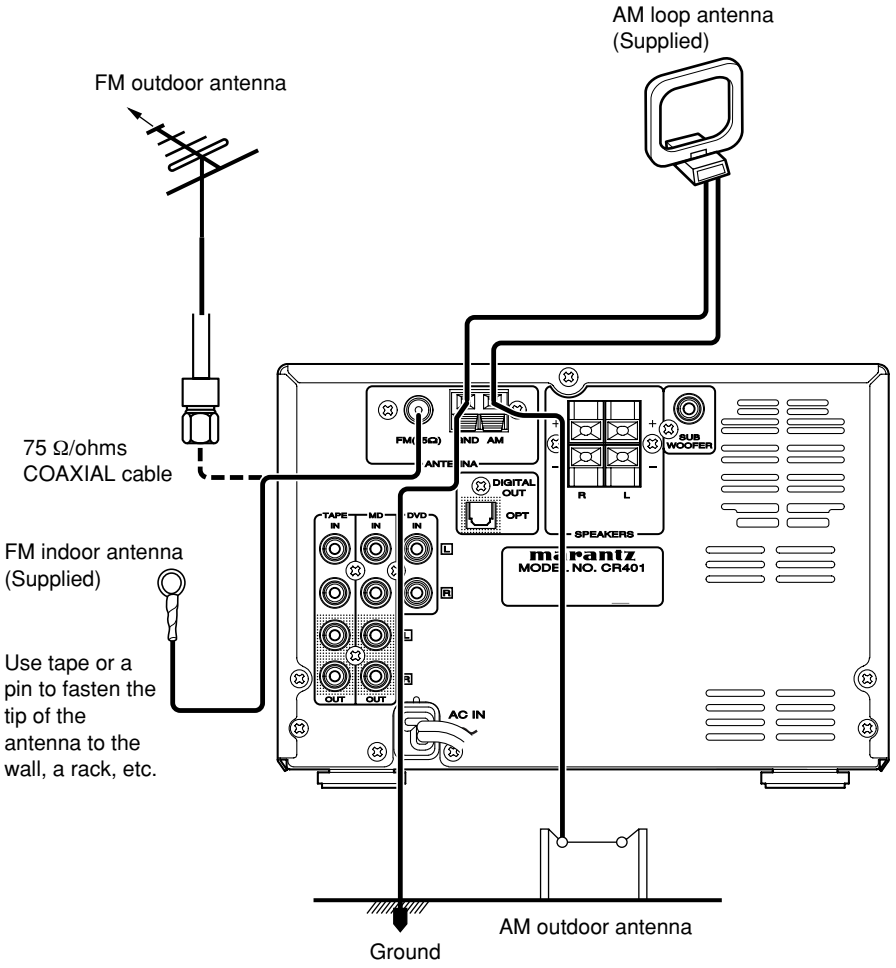
Used to select CD tracks, tuner presenting and recalling stations.

31 CLOCK CALL button

Used to display the current time and used to set the clock setting.

CONNECTIONS

CONNECTING THE ANTENNA TERMINALS



■ AM loop antenna assembly

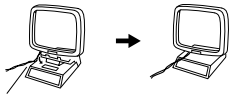
1. Remove the vinyl tie and take out the connection line.

2. Connect to the AM antenna terminals.

3. Bend in the reverse direction.

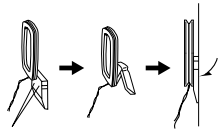
4.

a. With the antenna on top any stable surface.



Mount

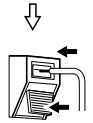
b. With the antenna attached to the wall.



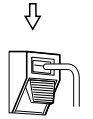
Installation hole Mount on the wall, etc.

■ Connection of AM antennas

1. Push the lever.



2. Insert the conductor.



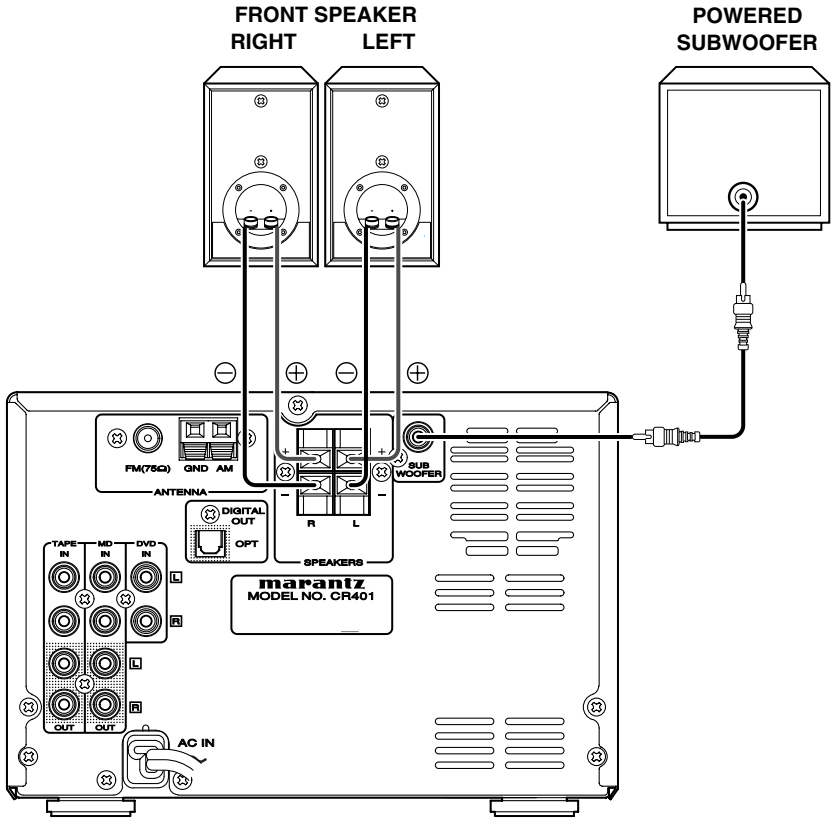
3. Return the lever.

Notes

- Do not connect two FM antennas simultaneously.
- Even if an external AM antenna is used, do not disconnect the AM loop antenna.
- Make sure AM loop antenna lead terminals do not touch metal parts of the panel.

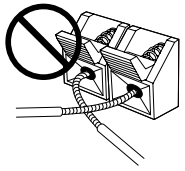
CONNECTIONS

CONNECTING SPEAKERS



Before you connect your speakers, read the following:

- Disconnect the mains cord from the wall outlet.
- Read the instructions supplied with your speakers.
- Pay close attention to speaker wiring polarity. In other words, connect positive ⊕ terminals only to positive ⊕ terminals, and negative ⊖ terminals only to negative ⊖ terminals. If you get them the wrong way around, the sound will be out of phase and will sound odd.
- Only use speakers with an impedance of 6 ohms or higher. If you use speakers with a lower impedance, and use the amplifier at high volume levels for a long period of time, the built-in protection circuit may be activated.
- Unnecessarily long or very thin speaker wires may affect the sound quality and should be avoided.
- Be careful not to short the positive and negative connections. Doing so may damage the CR401.



- Don't connect more than one wire to each speaker terminal. Doing so may damage the CR401.
- If you want to connect a single speaker instead of a pair, connect it to either the left or right speaker terminals, not both.

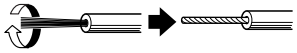
■ Connecting a subwoofer

Use the PRE OUT SUBWOOFER jack to connect a powered subwoofer (the power amplifier is built in). If your subwoofer is a passive type (the power amplifier is not built in), connect a monaural power amplifier to the PRE OUT SUBWOOFER jack and connect the subwoofer to the amplifier.

■ Connecting Speaker Wire

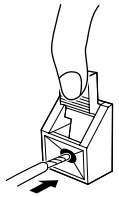
1. Strip away approx. 10 mm (3/8 inch) of wire insulation.

2. Twist the bared wire ends tight, to prevent short circuits.



3. Push the terminal lever in the direction of the arrow, and keep this condition.

4. Insert the bare part of the wire into the hole in the side of each terminal.

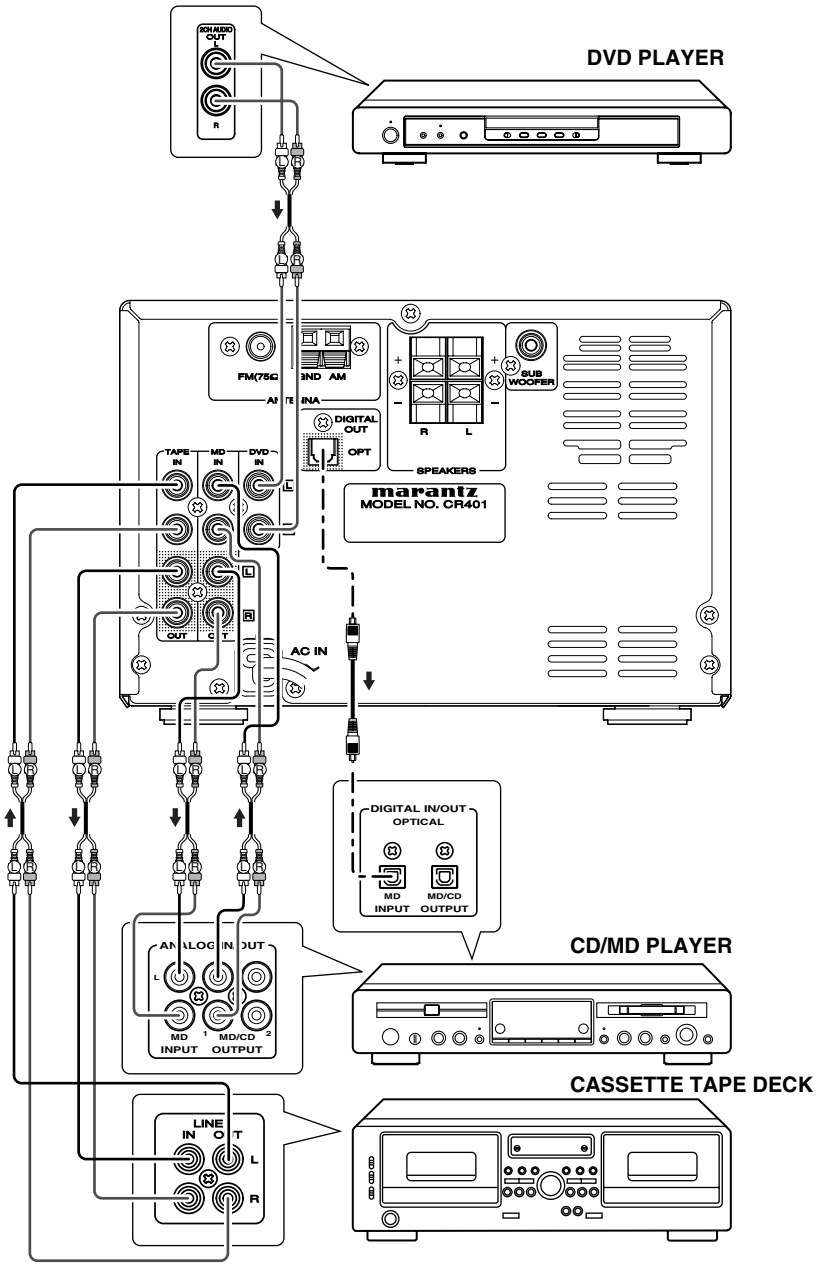


5. Put the terminal lever back, and make sure it is fastened securely by pulling the wire lightly.

ENGLISH

ENGLISH

CONNECTING ANALOG / DIGITAL COMPONENTS



■ Before Making Any Connections

- Read the manuals supplied with your components.
- Don't connect the mains cord until you've completed and double-checked all connections.

Optical Digital Output

The CR401's optical digital output has a shutter-type cover that opens when an optical plug is inserted and closes when it's removed. Push a plug in all the way.

Caution

To prevent shutter damage, hold the optical plug straight when inserting and removing.

RCA Connection Color Coding

RCA-type connections are usually color coded: red and white.
Use red plugs to connect right-channel audio inputs and outputs (typically labeled "R").
Use white plugs to connect left-channel audio inputs and outputs (typically labeled "L").

- Push plugs in all the way to make good connections (loose connections can cause noise or malfunctions).
- To prevent interference, keep audio cables away from mains cords and speaker cables.

BASIC OPERATION

■ Power Up the CR401

Before connecting the mains cord, complete all connections (☞ page 8 to 10).

1. Connect the mains cord to a suitable wall outlet.
- The CR401 enters Standby mode, and the Standby indicator comes on.

2. To turn on the CR401, press the **POWER ON/STANDBY** switch ① or ⏻ button 1.
- The CR401 comes on, the display lights up, and the Standby indicator goes off.
- To turn off the CR401, press the **POWER ON/STANDBY** switch ① or ⏻ button 1 again. The CR401 enters Standby mode and the Standby indicator comes on.

■ Selecting Sound Sources

1. Use the **INPUT** button ⑧ or 9 to select one of the following sound sources: CD, FM, AM, TAPE, MD and DVD.
- The currently selected source is shown on the display.

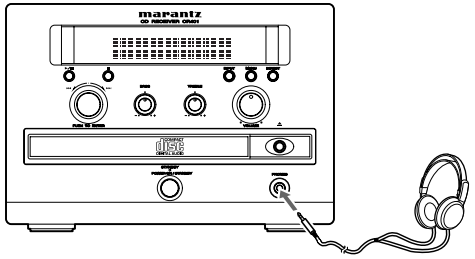
2. If you selected CD, see “PLAYING CD” on page 12.
- If you selected AM or FM, see “LISTENING TO FM/AM” on page 15.
- If you selected TAPE, MD, or DVD, start playback on the relevant component.

■ Adjusting the Volume

1. To adjust the volume, use the Master **VOLUME** knob ⑤, or the **VOLUME** buttons 27.
- Turn the Master **VOLUME** knob ⑤ clockwise to increase the volume, counterclockwise to decrease it.

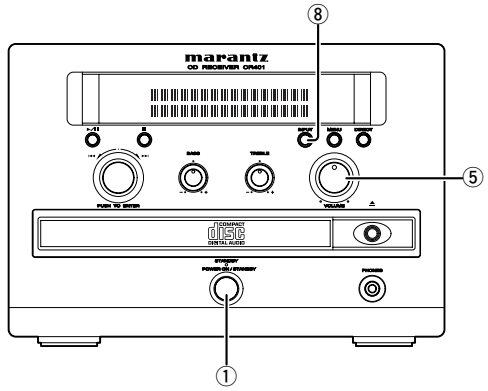
■ Using Headphones

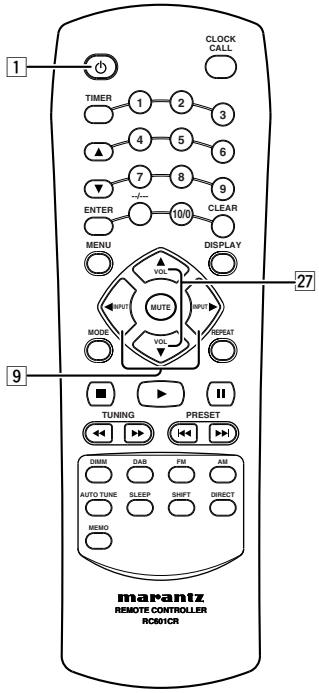
You can connect a pair of stereo headphones to the CR401’s PHONES jack for private listening, as shown.



Note

Always turn down the volume before connecting your head-phones.





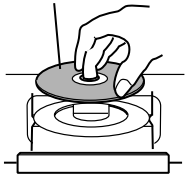
CD OPERATION

ENGLISH

PLAYING CD

1. Press the **POWER ON/STANDBY** switch ① or ⏻ button 1 to turn on the power.
2. Press the **OPEN/CLOSE** ⏏ button ④ to open the disc tray, put the CD on the tray with the label-side facing up, and press the **OPEN/CLOSE** ⏏ button ④ again to close the tray.
   - Be sure to put 8 cm discs in the center of the tray.

Label side



3. Press the **PLAY/PAUSE** ►/II button ⑭ or **PLAY** ► button 25 to start playback.
   - Playback starts and the "►" indicator appears on the display.

Note

If you press the **OPEN/CLOSE** ⏏ button ④ or **PAUSE** II button 24 in except CD mode, the sound source is changed to CD mode automatically.

■ To Stop Playback

- Press the **STOP** ■ button ⑫ or 10.

■ To Pause Playback

- Press the **PLAY/PAUSE** ►/II button ⑭ or **PAUSE** II button 24. "II" indicator appears on the display.
- To resume playback, press the **PLAY/PAUSE** ►/II button ⑭ or **PLAY** ► button 25.

■ To Fast Forward or Fast Reverse (remote controller only)

- During playback or while playback is paused, press and hold the ►► button 12 to fast forward, or the ◄◄ button 11 to fast reverse.
- For MP3, fast reverse only works within the MP3 track that is currently playing.
- If you press the button for more than four seconds, the fast forward or fast reverse speed increases.

■ To Select Tracks

On the CR401:

- Turn the **Easy JOG** ⏮/⏭ knob ⑮ to select a track for playback.
- If you select a track while playback is stopped, press the **Easy JOG** ⏮/⏭ knob ⑮ to start playback.
- Press the **Easy JOG** ⏮/⏭ knob ⑮ to jump to the next track during playback.

On the remote controller:

- Press the ⏭ button 23 to select the next track, or the ⏮ button 22 to select the previous track.
- If you press the ⏮ button 22 during playback or while play-back is paused, the beginning of the current track is selected.
- If you select a track while playback is stopped, press the **PLAY** ► button 25 to start playback.

Note

With CDs and MP3 discs that contain many tracks, playback may take a while to start.

■ Selecting Tracks by Number

Use the number buttons to select specific tracks.

1. Use the number buttons to enter a track number. Playback starts automatically.

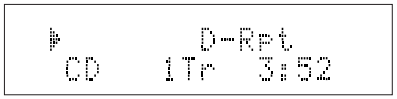
- For MP3 disc, select the serial number assigned to the track.
- To enter a track number smaller than or equal to 10, press each **Numeric** button 30.
  For example, to enter track number 10, press **10/0**.
  Use the **--/---** button 4 to enter track numbers above 10.
- To enter a track number from 11 to 99, press **--/---** button 4 once.
  For example, to enter track number 15, press **--/---** button 4 , **1** and **5**.
- To enter a track number greater than or equal to 100, press **--/---** button 4 twice.
  For example, to enter tranck number 123, press **--/---** button 4 twice, **1**, **2** and **3**.

■ Repeat Playback

Use the Repeat function to play a track, a folder for MP3 only or a disc repeatedly.

1. During playback, press the **REPEAT** button 26 repeatedly to select repeat mode.

D-Rpt: Repeat the disc



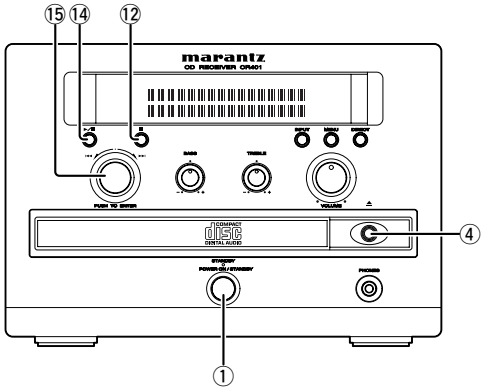
F-Rpt: Repeat current folder (MP3 only)

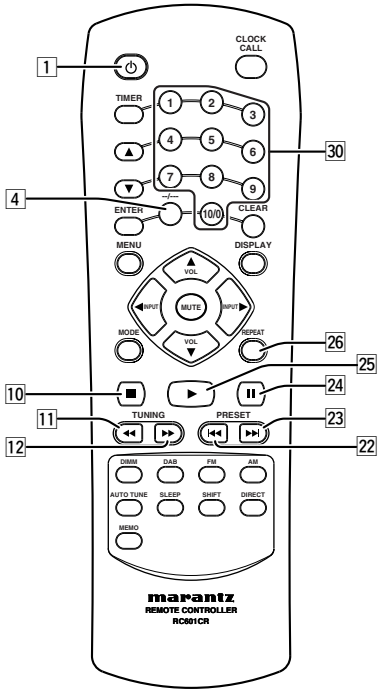
T-Rpt: Repeat current track

2. To cancel Repeat playback, press the **REPEAT** button 26 repeatedly to turn off the "**Rpt**" indicator.

Notes

- If you press the **REPEAT** button 26 during memory playback, your custom program will play "D-Rpt" and "T-Rpt" only.
- If you press the **REPEAT** button 26 during random playback for CD, you will use random playback repeatedly.





■ Random Playback

Use the Random function to play tracks in random order.

1. While stopped, press the **MODE** button [8] repeatedly to display "**D-Rdm**" indicator.
2. Press the **PLAY** ► button [25] to start random playback.
   • All tracks are played in random order.
3. To cancel random playback, stop playback, and then press the **MODE** button [8] repeatedly until the "**Rdm**" indicator disappears.

■ Memory Playback

Use the Memory function to make a custom program of your favourite tracks.

1. While stopped, press the **MODE** button [8] repeatedly until the "**Mem**" indicator appears on the display.
2. To add a track to your program, use the ⏮ button [22] and ⏭ button [23] to select it, and then press the **ENTER** button [5].
3. To start memory playback, press the **PLAY** ► button [25].

Advice

- Memory playback stops automatically when all the tracks in the program have been played.
- You can add up to 20 tracks to your program.
- Tracks can also be added by using the number buttons.
- For information on using the number buttons to select a track, see "Selecting Tracks by Number" on page 12.
- You can check which tracks you've added to the program by using the ◄◄ button [11] and ►► button [12].

■ To Stop Memory Playback

- Press the **STOP** ■ button ⑫ or [10].

■ To Remove the Last Track in the Program

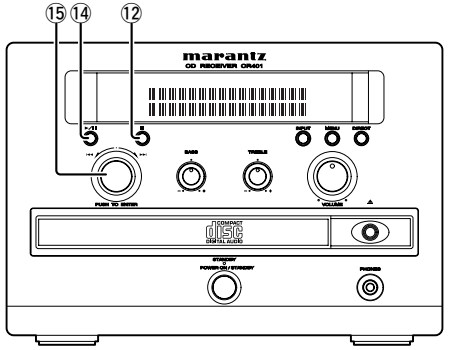
- While memory playback is stopped, press the **CLEAR** button [29]. Each time you press it, the last track in the program is removed.

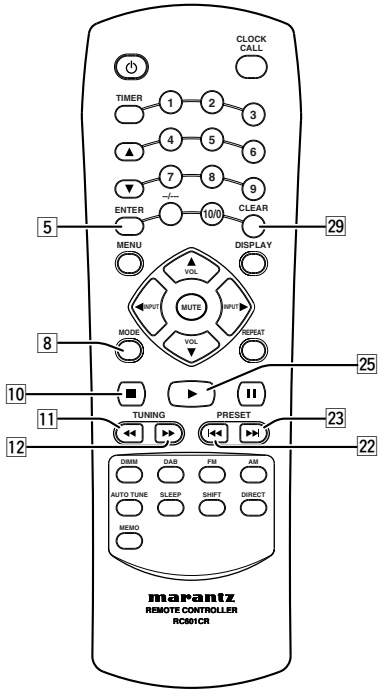
■ To Cancel Memory Playback

- While memory playback is stopped, press the **MODE** button [8] repeatedly until the "**Mem**" indicator disappears. The entire program will be deleted.

Notes

- If the total playing time of your program exceeds 99 minutes and 59 seconds, "**--:--**" is displayed. (This does not affect program playback.)
- The program is deleted when the disc tray is opened or select the CD normal play mode by **MODE** button [8].





ENGLISH

DISPLAYING INFORMATION

This section explains how to display various information, including the remaining track time, remaining disc time, and ID3 tag for MP3 tracks.

1. During playback, press the **DISPLAY** button 28 repeatedly to cycle through the following options.

■ Audio CD

Elapsed track time:

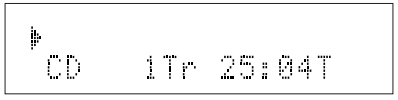
The length of time that the current track has been playing (default display).

Remaining track time:

The amount of time remaining for the current track ("**R**" indicator appears).

Remaining disc time:

The amount of time remaining for the entire disc ("**T**" indicator appears).



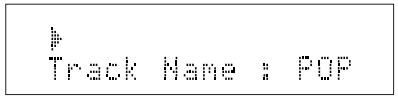
■ MP3 Disc

Elapsed track time:

The length of time that the current track has been playing (default display).

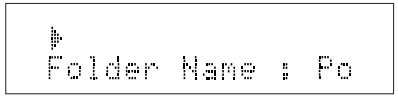
Track name:

Name of the current track.



Folder name:

Name of the current folder.

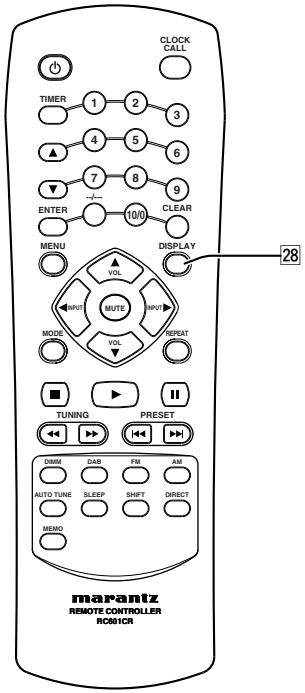


Title name:

Title of the current track (if ID3 tag present).

Notes

- To display the disc name, while playback is stopped, press the **DISPLAY** button 28.
- If a track or folder name contains a character that cannot be displayed, it will be displayed as "*".



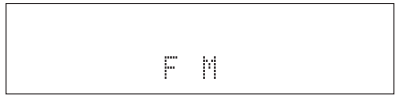
TUNER OPERATION

LISTENING TO FM/AM

■ FM Auto preset memory

1. Press the **POWER ON/STANDBY** switch ① or ⏻ button 1 to turn on the power.

2. Watching the display, press the **INPUT** button ⑧ or 9 or **FM** button 19 to select the FM band.



3. Press the **AUTO TUNE** button 14.

4. Press the **ENTER** button 5.

- The unit automatically begins searching for FM broadcast stations.

- When the first FM broadcast station is found, that station is stored in the preset memory at channel A1.
- Subsequent stations are automatically stored in order at preset channels A1 to A10, B1 to B10, C1 to C10, D1 to D10 for a maximum of 40 stations.
- Channel A1 is tuned in after the auto preset memory operation is completed.

Notes

- If an FM station cannot be preset automatically due to poor reception, use the “Manual tuning” operation to tune in the station, then preset it using the manual “Preset memory” operation.
- To interrupt this function, press the **POWER ON/STANDBY** switch ① or ⏻ button 1.
- Perform this operation from the remote control unit.

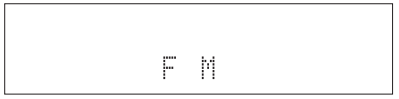
■ Default value

Auto tuner presets	
A1 ~ A10	87.5 / 89.1 / 98.1 / 108 / 90.1 / 90.1 / 90.1 / 90.1 / 90.1 / 90.1 MHz
B1 ~ B10	522 / 603 / 999 / 1404 / 1611 kHz, 90.1 / 90.1 / 90.1 / 90.1 / 90.1 MHz
C1 ~ C10	90.1 MHz
D1 ~ D10	90.1 MHz

■ Auto tuning (FM/AM)

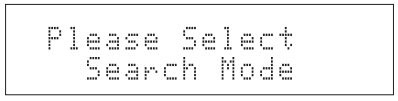
1. Press the **POWER ON/STANDBY** switch ① or ⏻ button 1 to turn on the power.

2. Watching the display, press the **INPUT** button ⑧ or 9 or **FM** button 19 or **AM** button 21 to select the desired band (AM or FM).



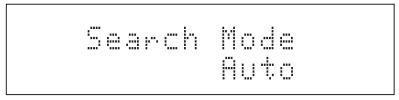
3. Press the **MENU** button ⑦ or 6 to select menu.

4. Either turn the **Easy JOG** ⏮/⏭ knob ⑮ or press the ▲ or ▼ button 3 to select “**Search Mode**”.

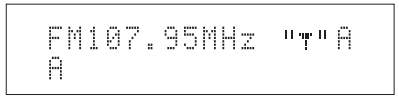


5. Press the **Easy JOG** ⏮/⏭ knob ⑮ or **ENTER** button 5 to set search mode.

6. Either turn the **Easy JOG** ⏮/⏭ knob ⑮ or press the ▲ or ▼ button 3 to select “**Auto**”.



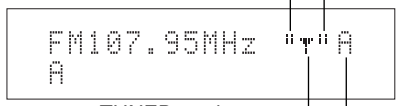
7. Press the **Easy JOG** ⏮/⏭ knob ⑮ or **ENTER** button 5 to set the auto tuning mode.



8. Either turn the **Easy JOG** ⏮/⏭ knob ⑮ or press the ◀◀ button 11 or ▶▶ button 12.

- Automatic searching begins, then stops when a station tuned in.

STEREO receive mode



TUNED mode

AUTO TUNING mode

Notes

- When in the auto tuning mode on the FM band, the "T" display on the panel when the stereo broadcast is tuned in. At open frequencies, the noise is muted and the "T" tuned off.
- If the signal is weak, if may be difficult to tune into the station in stereo. In such a case, press the **MODE** button 8 on the remote control. FM stereo broadcasts are received in monaural and the " " is not illuminated. To return to stereo mode, press the **MODE** button 8 on the remote control again.
- If tuning does not stop at the desired station. Use “Manual tuning” operation.

■ Manual tuning (FM/AM)

1. Press the **POWER ON/STANDBY** switch ① or ⏻ button 1 to turn on the power.

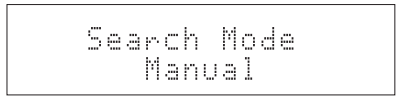
2. Watching the display, press the **INPUT** button ⑧ or 9 or **FM** button 19 or **AM** button 21 to select the desired band (AM or FM).

3. Press the **MENU** button ⑦ or 6 to select menu.

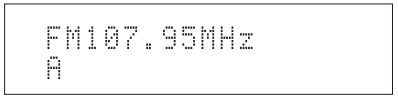
4. Either turn the **Easy JOG** ⏮/⏭ knob ⑮ or press the ▲ or ▼ button 3 to select “**Search Mode**”.

5. Press the **Easy JOG** ⏮/⏭ knob ⑮ or **ENTER** button 5 to set search mode.

6. Either turn the **Easy JOG** ⏮/⏭ knob ⑮ or press the ▲ or ▼ button 3 to select “**Manual**”.

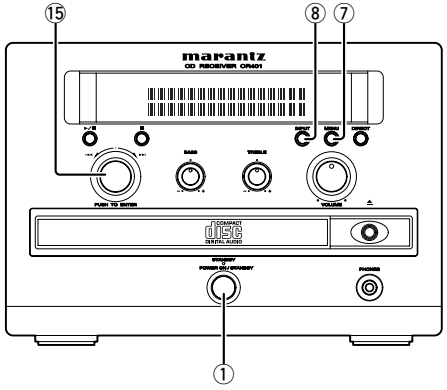


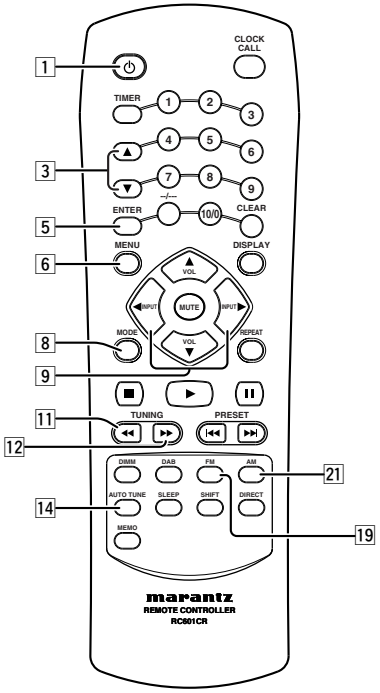
7. Press the **Easy JOG** ⏮/⏭ knob ⑮ or **ENTER** button 5 to set the manual tuning mode.



8. Either turn the **Easy JOG** ⏮/⏭ knob ⑮ or press the ◀◀ button 11 or ▶▶ button 12 to tune in the desired station.

- The frequency changes continuously when the ◀◀ button 11 or ▶▶ button 12 on the remote control unit is held in.





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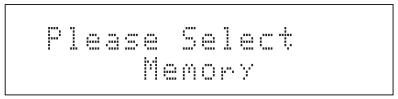
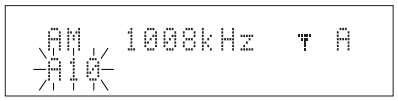
TUNER OPERATION

■ Preset stations (FM/AM)

1. Use the “Auto tuning” or “Manual tuning” operation to tune in the station to be preset in the memory.
2. Press the **MENU** button ⑦ or 6 to select menu.
3. Either turn the **Easy JOG** ⏮/⏭ knob ⑮ or press the ▲ or ▼ button 3 to select “**Memory**”.



4. Press the **Easy JOG** ⏮/⏭ knob ⑮, or **ENTER** button 5 to set the preset mode and make the preset channel number flash.



- Steps 1 to 4 can be skipped when using the **MEMO** 15 button.
  When this button is pressed, the preset memory standby mode is set, regardless of the menu setting at that time.

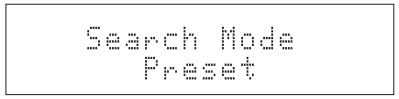
5. While the preset channel number is flashing, either press the **SHIFT** button 18 to select the desired memory group (A to D).
6. While the preset channel number is flashing, either turn the **Easy JOG** ⏮/⏭ knob ⑮, press the ▲ or ▼ button 3 or **Numeric** button 30 to select the desired preset channel (1 to 10).
7. While the preset channel number is flashing, either press the **Easy JOG** ⏮/⏭ knob ⑮ or **MEMO** button 15 to store the station in the preset memory.
   - To preset other channels, repeat steps 2 to 6.
   - A total of 40 broadcast stations can be preset — 10 stations (channels 1 to 10) in each of groups A to D.

■ Recalling preset stations (FM/AM)

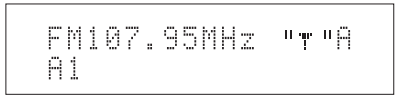
On the CR401:

1. Press the **POWER ON/STANDBY** switch ① to turn on the power.
2. Watching the display, press the **INPUT** button ⑧ to select FM or AM.
3. Press the **MENU** button ⑦ to select menu.
4. Turn the **Easy JOG** ⏮/⏭ knob ⑮ to select “**Search Mode**”.

5. Press the **Easy JOG** ⏮/⏭ knob ⑮ to set search mode.
6. Turn the **Easy JOG** ⏮/⏭ knob ⑮ to select “**Preset**”.



7. Press the **Easy JOG** ⏮/⏭ knob ⑮ and set the preset mode.



8. Watching the display, turn the **Easy JOG** ⏮/⏭ knob ⑮ to select the desired preset channel.

On the remote controller:

1-1. Press the ⏮ button 22 or ⏭ button 23 to select the desired preset channel.

1-2. Press the **SHIFT** button 18 and select the desired memory group (A to D) .

1-3. Press the **Numeric** button 30 to select the desired preset channel (1 to 10).

■ RDS (Radio Data System)

- RDS (works only on the FM band) is a broadcasting service which allows station to send additional information along with the regular radio program signal.
- The following three types of RDS information can be received on this unit:

• Program Type (PTY)

- PTY identifies the type of RDS program.
- The program types and their displays are as follows:

NEWS	News
AFFAIRS	Current Affairs
INFO	Information
SPORT	Sports
EDUCATE	Education
DRAMA	Drama
CULTURE	Culture
SCIENCE	Science
VARIED	Varied
POP M	Pop Music
ROCK M	Rock Music
EASY M	Easy Listening Music
LIGHT M	Light Classical
CLASSICS	Serious Classical
OTHER M	Other Music
WEATHER	Weather
FINANCE	Finance
CHILDREN	Children’s Programs
SOCIAL	Social Affairs
RELIGION	Religion
PHONE IN	Phone In
TRAVEL	Travel
LEISURE	Leisure
JAZZ	Jazz Music
COUNTRY	Country Music
NATION M	National Music
OLDIES	Oldies Music
FOLK M	Folk Music
DOCUMENT	Documentary

• Traffic Program (TP)

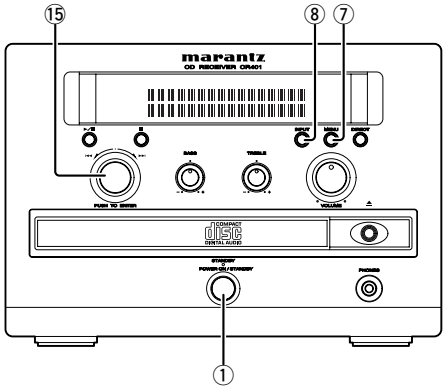
- TP identifies programs that carry traffic announcements.
- This allows you to easily find out the latest traffic conditions in your area before you leaving home.

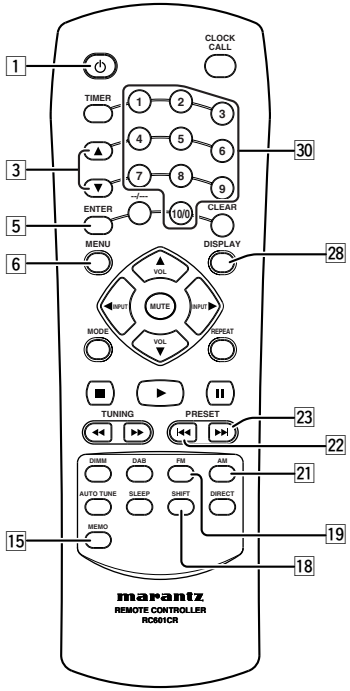
• Radio Text (RT)

- RT allows the RDS station to send text messages that appear on the display.

Note

- The operations described below pressing the **DISPLAY** button 28 will not function in areas in which there are no RDS broadcasts.

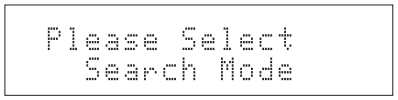




■ RDS search

Use this function to automatically tune to FM stations that provide RDS service.

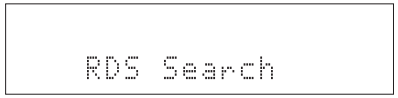
1. Press the **MENU** button ⑦ or 6 to select menu.



2. Either turn the **Easy JOG** ⏮/⏭ knob ⑮ or press the ▲ or ▼ button 3 to display "**RDS**".

3. Press the **Easy JOG** ⏮/⏭ knob ⑮ or **ENTER** button 5 to set the RDS search selection mode.

4. Either turn the **Easy JOG** ⏮/⏭ knob ⑮ or press the ▲ or ▼ button 3 to display "**RDS Search**".

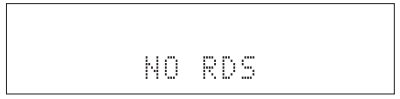


5. Press the **Easy JOG** ⏮/⏭ knob ⑮ or **ENTER** 5 button to set the RDS search standby mode.

6. Either turn the **Easy JOG** ⏮/⏭ knob ⑮ or press the ▲ or ▼ button 3. The RDS search automatically begins and the "**RDS Search**" blinks.

- If no RDS station is found with above operation, all the reception band are searched.
- When the broadcast station is found, that station's name appears on the display.

7.



- If no other RDS station is found when all the frequencies are searched, "**NO RDS**" is displayed.

■ PTY search

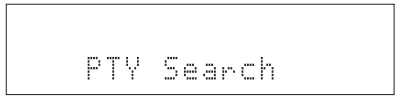
- Use this function to find RDS stations broadcasting a designated program type (PTY).
- For a description of each program type, refer to "Program Type (PTY)".

1. Press the **MENU** button ⑦ or 6 to select menu.

2. Either turn the **Easy JOG** ⏮/⏭ knob ⑮ or press the ▲ or ▼ button 3 to display "**RDS**".

3. Press the **Easy JOG** ⏮/⏭ knob ⑮ or **ENTER** button 5 to set the RDS search selection mode.

4. Either turn the **Easy JOG** ⏮/⏭ knob ⑮ or press the ▲ or ▼ button 3 to display "**PTY Search**".

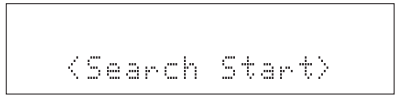


5. Press the **Easy JOG** ⏮/⏭ knob ⑮ or **ENTER** button 5 to set the PTY search selection mode.

6. Watching the display, either turn the **Easy JOG** ⏮/⏭ knob ⑮ or press ▲ or ▼ button 3 to call out the desired program type.

- When receiving an RDS station, its program type is displayed first.
- When not receiving an RDS station, "**PTY**" flashes.

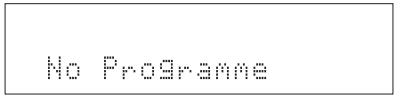
7. Press the **Easy JOG** ⏮/⏭ knob ⑮ or **ENTER** button 5 to set the PTY search standby mode.



8. Either turn the **Easy JOG** ⏮/⏭ knob ⑮ or press the ▲ or ▼ button 3. The RDS search automatically begins and the "**RDS Search**" blinks.

- If there is no station broadcasting the designated program type above operation, all the reception bands are searched.
- The station name is displayed on the display after searching stops.

9.



- If no other station broadcasting the designated program type is found when all the frequencies are searched, "**NO programme**" is displayed.

■ TP search

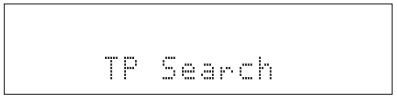
Use this function to find RDS stations broadcasting traffic program (TP).

1. Press the **MENU** button ⑦ or 6 to select menu.

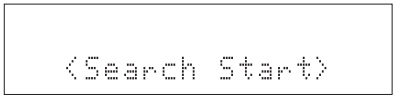
2. Either turn the **Easy JOG** ⏮/⏭ knob ⑮ or press the ▲ or ▼ button 3 to display "**RDS**".

3. Press the **Easy JOG** ⏮/⏭ knob ⑮ or **ENTER** button 5 to set the RDS search selection mode.

4. Either turn the **Easy JOG** ⏮/⏭ knob ⑮ or press the ▲ or ▼ button 3 to display "**TP Search**".



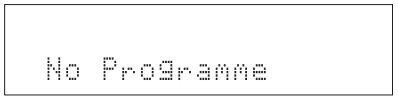
5. Press the **Easy JOG** ⏮/⏭ knob ⑮ or **ENTER** button 5 to set the TP search standby mode.



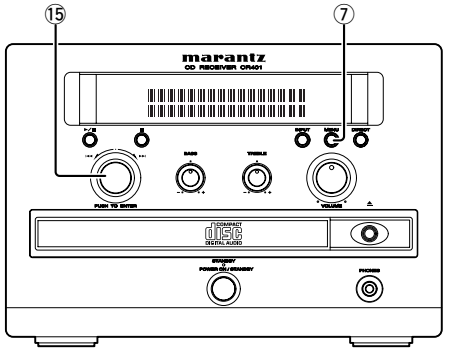
6. Either turn the **Easy JOG** ⏮/⏭ knob ⑮ or press the ▲ or ▼ button 3. The RDS search automatically begins and the "**RDS Search**" blinks.

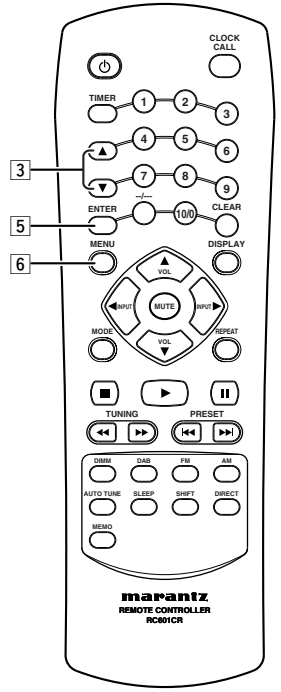
- If no TP station is found with above operation, all the reception bands are searched.
- The station name is displayed on the display after searching stops.

7.



- If no other TP station is found when all the frequencies are searched, "**NO programme**" is displayed.





ENGLISH

ENGLISH

■ RT (Radio Text)

1. Press the **MENU** button ⑦ or 6 to select menu.
2. Either turn the **Easy JOG** ⏮/⏭ knob ⑮ or press the ▲ or ▼ button 3 to display "**RDS**".
3. Press the **Easy JOG** ⏮/⏭ knob ⑮ or **ENTER** button 5 to set the RDS search selection mode.
4. Either turn the **Easy JOG** ⏮/⏭ knob ⑮ or press the ▲ or ▼ button 3 to display "**RT ON/OFF**".

5. Press the **Easy JOG** ⏮/⏭ knob ⑮ or **ENTER** button 5 to set the RT ON/OFF selection mode.
6. Either turn the **Easy JOG** ⏮/⏭ knob ⑮, press the ▲ or ▼ button 3 to choose the "**RT ON**" or "**RT OFF**".

7. Press the **Easy JOG** ⏮/⏭ knob ⑮ or **ENTER** button 5 to set whether to enable or stop the RADIO TEXT function.
   - If no text data is being broadcast, "**NO TEXT DATA**" is displayed.

■ CT (Clock Time)

- You can set clock time automatically by using the RDS stations broadcasting Clock Time (CT) information.
  This unit picks CT information up and automatically resets itself, when you set "CT ON".

1. Press the **MENU** button ⑦ or 6 to select menu.
2. Either turn the **Easy JOG** ⏮/⏭ knob ⑮ or press the ▲ or ▼ button 3 to display "**RDS**".
3. Press the **Easy JOG** ⏮/⏭ knob ⑮ or **ENTER** button 5 to set the RDS search selection mode.
4. Either turn the **Easy JOG** ⏮/⏭ knob ⑮ or press the ▲ or ▼ button 3 to display "**CT ON/OFF**".

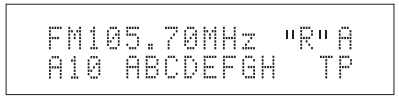
5. Press the **Easy JOG** ⏮/⏭ knob ⑮ or **ENTER** button 5 to set the CT ON/OFF selection mode.
6. Either turn the **Easy JOG** ⏮/⏭ knob ⑮, press the ▲ or ▼ button 3 to choose the "**CT ON**" or "**CT OFF**".

7. Press the **Easy JOG** ⏮/⏭ knob ⑮ or **ENTER** button 5 to set whether enable or stop the CT function.
   - If you live close to the border with another country, the CT information may have been taken from a radio station in another time zone.
     In this case you should select "**CT OFF**".
     In this mode, although "CT" data are entered, the time is not changed to the current time.

■ Switching RDS information display

1. Use the procedure described at "Auto tuning", "Manual tuning" or "Recalling preset stations" to tune in a frequency with an RDS station.
2. Press the **DISPLAY** button 28 to switch the RDS reception information.
   - The display switches as shown below each time the **DISPLAY** button 28 is pressed.

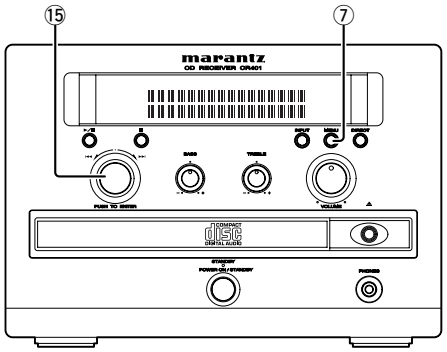
❶ **PS:**
The program service name and frequency of the station tuned in is displayed.

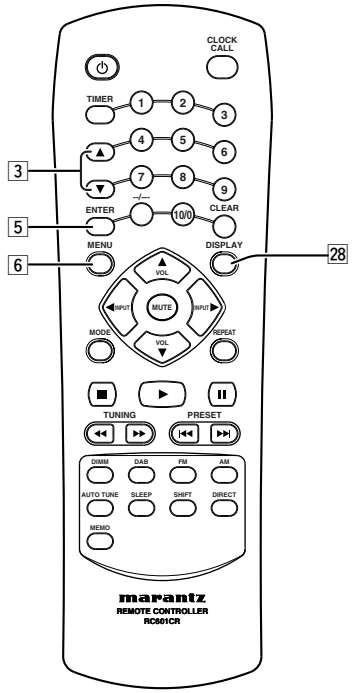


The above is an example for when there is TP data but no RT data.

❷ **PTY:**
The program type of the tuned in broadcast is displayed.

❸ **CT:**
The current time is displayed.





OTHER OPERATION

■ Muting the CR401

Use this function to mute the output of the CR401 temporarily.

1. Press the **MUTE** button 7.
- The output is muted and "**Muting**" flashes on the display.

2. To unmute the CR401, press the **MUTE** button 7 again, or adjust **VOLUME ▲▼** button 27.
- The output is unmuted and "**Muting**" goes off.

Note:

The Mute function is cancelled when the CR401 is set to Standby.

■ Adjusting the Bass & Treble

Use the Bass and Treble functions to adjust the tone of the sound to your personal preference.

1. Press the **DIRECT** button ⑥ or 20 to select "**Tone Direct Off**".

2. Use the **Tone control Bass** knob ⑩ or the **Tone control TREBLE** knob ⑨ to adjust the bass or treble.

■ Using Direct Mode

In Direct mode, the bass and treble tone circuits are bypassed, creating a shorter signal path for a purer sound.

1. Press the **DIRECT** button ⑥ or 20 to select "**Tone Direct On**".

2. To turn off Direct mode, press the **DIRECT** button ⑥ or 20 again to select "**Tone Direct Off**".

SETTING THE CLOCK

■ Present time setting

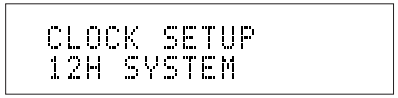
- To operate the timer program, you must set the present time.
  The clock time can be set 12-hour or 24-hour system.
  The clock displays "**SUNDAY**" "**12H SYSTEM**" "**0:00AM**" at initial.

1. Press the **CLOCK CALL** button 31. Then the "**CLOCK 0:00AM**" is displayed.

2. Press the **ENTER** button 5, the day of the week flashes.

3. Press the ▲ or ▼ button 3 to select a day.

4. Press the **ENTER** button 5, "**12H SYSTEM**" is flashes.



If you want to select 24H SYSTEM, either press the ▲ or ▼ button 3.

5. Press the **ENTER** button 5 to set the desired system. The hour digit flashes.

6. Press the ▲ or ▼ button 3 to set the hours and press the **ENTER** button 5. The minute digit flashes.

7. Press the ▲ or ▼ button 3 to set the minutes, and press the **ENTER** button 5. The display flashes.

8. Press the **ENTER** button 5 to confirm the actual time. The clock now starts.
- In the event of a power failure or when the AC mains cord is disconnected. You must reset the clock.

■ Displaying present time

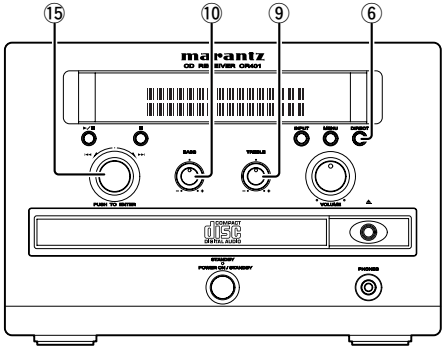
1. A present time can be displayed for 5 seconds by pressing the **CLOCK CALL** button 31.

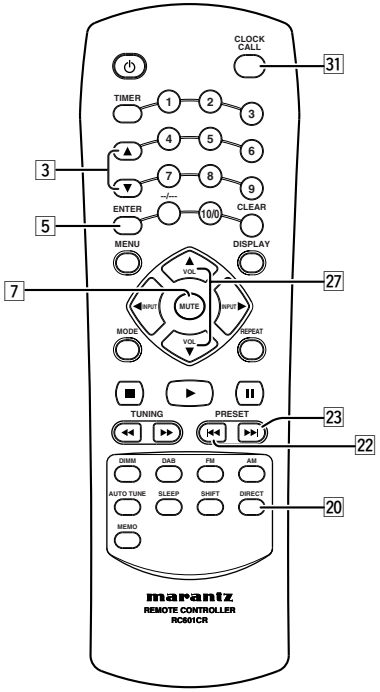
■ Displaying present time in Standby mode

If you want to be displayed the present time in Standby mode, press the **CLOCK CALL** button 31 in Standby mode.

Note

Setting the CR401 to display the present time will slightly increase the power consumption in Standby mode.





OTHER OPERATION

TIMER PROGRAMS

■ About the Timer Programs

- This unit has three timer programs so that you can turn it on and off automatically at certain times and on certain days of the week.
- Timer programs can be set for single operation (Once) or everyweek operation (Everyweek) or everyday operation (Everyday) or the days of the week operation (Weekday).

■ Timer Program Examples

- The following examples highlight some of the ways in which you can use the timer programs.

  Timer program 1: To wake up to your favorite radio station every morning, set as follows:

  TIMER PROGRAM 1 SET → FM/AM → A1 FM 87.50MHz → EVERYDAY → ON TIME= 7:00AM → OFF TIME= 7:30AM
  (If you want a radio alarm only on weekdays, select "WEEKDAY" instead of "EVERYDAY" and specify "MON-FRI".)
  Timer program 2: To listen a radio program on only this Sunday, set as follows:
  TIMER PROGRAM 2 SET → FM/AM → B1 AM522kHz → ONCE → SUNDAY → ON TIME= 9:00PM → OFF TIME=10:00PM

■ Timer Program Overlap

- If two or three timer programs are set to the same ON TIME, the timer program with the lowest number has priority.

  For example, if Timer program 1 and Timer program 2 are both set to an ON TIME of 7:00AM, Timer program 1 has priority and Timer program 2 is ignored.

  Timer program 1: 7:00AM - 1:00PM (This timer has priority)
  Timer program 2: 7:00AM - 0:30PM

  If the setting of the two timer program overlaps, the earlier timer has priority.

  Timer program 1: 9:00AM - 10:00AM
  Timer program 2: 8:00AM - 10:00AM (This Timer program has priority)

■ Timer Program Setting

- You must set the clock time before you set the timer programs.
- You need to store preset stations before you set the timer programs.

1. Press the **TIMER** button [2], "**TIMER PROGRAM 1**" is displayed.

```
TIMER PROGRAM 1
```

2. The display changes as follows each time the **Easy JOG** ⏮/⏭ knob ⑮ is turned or the ▲ or ▼ button [3] is pressed.

TIMER PROGRAM 1 ⇄ TIMER PROGRAM 2 ⇄ TIMER PROGRAM 3

3. Press the **Easy JOG** ⏮/⏭ knob ⑮ or **ENTER** button [5] to select timer program number.

4. The display indicate "**TIMER PROGRAM x SET**".

```
TIMER PROGRAM 1
SET
```

Either turn the **Easy JOG** ⏮/⏭ knob ⑮ or press the ▲ or ▼ button [3], the display changes as follows.

TIMER PROGRAM x SET ⇄ TIMER PROGRAM x CONFIRM ⇄ TIMER PROGRAM x OFF ⇄ TIMER PROGRAM x ON

- If timer program is already available, to select "**TIMER PROGRAM x CONFIRM**" to scroll the timer setting contents.
- If timer program is already available, to select "**TIMER PROGRAM x ON**" to activate the timer.
- To select "**TIMER PROGRAM x OFF**" to turn off the timer program.

5. Press the **Easy JOG** ⏮/⏭ knob ⑮ or **ENTER** button [5] to select "**TIMER PROGRAM x SET**".

6. The display indicate "**TIMER PROGRAM x FM/AM**". Either turn the **Easy JOG** ⏮/⏭ knob ⑮ or press the ▲ or ▼ button [3], the display changes "**TIMER PROGRAM x FM/AM**".

```
TIMER PROGRAM 1
FM/AM
```

7. Press the **Easy JOG** ⏮/⏭ knob ⑮ or **ENTER** button [5] to select "**CD**", "**FM/AM**", "**TAPE**", "**MD**" or "**DVD**".

8. Either turn the **Easy JOG** ⏮/⏭ knob ⑮ or press the ▲ or ▼ button [3] to select Preset station to be programed.

```
TIMER PROGRAM 1
A1  FM  87.50MHz
```

9. Select the Operation method.

```
TIMER PROGRAM 1
ONCE
```

❶ Either turn the **Easy JOG** ⏮/⏭ knob ⑮ or press the ▲ or ▼ button [3] to select operation method "**ONCE**", "**EVERYWEEK**", "**EVERYDAY**" or "**WEEKDAY**" .

❷ Press the **Easy JOG** ⏮/⏭ knob ⑮ or **ENTER** button [5] to decide the operation.
When you select "**ONCE**" or "**EVERYWEEK**", you can select the day of the week by turning the **Easy JOG** ⏮/⏭ knob ⑮ or pressing the ▲ or ▼ button [3].
When you select "**WEEKDAY**", use the **Easy JOG** ⏮/⏭ knob ⑮ or pressing the ▲ or ▼ button [3] to select the first day, and then press the **Easy JOG** ⏮/⏭ knob ⑮ or **ENTER** button [5].
Use the **Easy JOG** ⏮/⏭ knob ⑮ or pressing the ▲ or ▼ button [3] to select the last day.
Then press the **Easy JOG** ⏮/⏭ knob ⑮ or **ENTER** button [5].

10. Set the On time.

```
TIMER PROGRAM 1
ON TIME=  0:00AM
```

❶ Either turn the **Easy JOG** ⏮/⏭ knob ⑮ or press the ▲ or ▼ button [3] to adjust the hour for the On time and press the **Easy JOG** ⏮/⏭ knob ⑮ or **ENTER** button [5].

❷ Either turn the **Easy JOG** ⏮/⏭ knob ⑮ or press the ▲ or ▼ button [3] to adjust the minutes for the On time and press the **Easy JOG** ⏮/⏭ knob ⑮ or **ENTER** button [5].

11. Set the Off time.

```
TIMER PROGRAM 1
OFF TIME= 0:00AM
```

❶ Either turn the **Easy JOG** ⏮/⏭ knob ⑮ or press the ▲ or ▼ button [3] to adjust the hour for the Off time and press the **Easy JOG** ⏮/⏭ knob ⑮ or **ENTER** button [5].

❷ Either turn the **Easy JOG** ⏮/⏭ knob ⑮ or press the ▲ or ▼ button [3] to adjust the minutes for the Off time.

12. Set the timer program.

❶ Press the **Easy JOG** ⏮/⏭ knob ⑮ or **ENTER** button [5] to decide the timer program setting.
Standby indicator lights up green and setting contents are scrolled.

Notes

- Timer program can activate regardless of power on or standby mode.
- When timer program is finished, the unit goes to standby mode.
- When timer program is activated, standby indicator lights green.
- You can cancel the Timer program setting procedure at any time by pressing the **TIMER** button [2].

OTHER OPERATION

■ Confirm and change timer program

• You can check and change the timer program setting as follows.

1. Press the **TIMER** button [2].
2. Either turn the **Easy JOG** ⏮/⏭ knob ⑮ or press the ▲ or ▼ button [3] to select timer program number.
3. You can change the displayed contents with the **Easy JOG** ⏮/⏭ knob ⑮ or ▲ or ▼ button [3] and **ENTER** buttons [5] if necessary.

Note

• Timer program is not changed if you quit confirming halfway through a procedure.

■ Timer program off

1. Press the **TIMER** button [2], "**TIMER PROGRAM 1**" is displayed.
2. Either turn the **Easy JOG** ⏮/⏭ knob ⑮ or press the ▲ or ▼ button [3] to select timer program number.
3. Press the **Easy JOG** ⏮/⏭ knob ⑮ or **ENTER** button [5], "**TIMER PROGRAM x SET**" is displayed.
4. Either turn the **Easy JOG** ⏮/⏭ knob ⑮ or press the ▲ or ▼ button [3] to select "**TIMER PROGRAM x OFF**".

5. Press the **Easy JOG** ⏮/⏭ knob ⑮ or **ENTER** button [5] to turn off the timer program.

Note

• To turn a timer program back on again, repeat this procedure and select "**TIMER PROGRAM x ON**".

■ Sleep timer

• The sleep timer function allows the unit to be in standby mode automatically after specific period of time.

1. Press the **SLEEP** button [17] on the remote control.

2. Each press of the button will increase the time before shut down in the following sequence.

OFF → 10 → 20 → 30 → 60 → 90 → 120

3. The sleep timer will be shown for 5 seconds in the display, and it will count down until the time has elapsed. When the programed sleep timer has elapsed, the unit will automatically turn off.

   Note that the display will be dimmed when the sleep timer is programed.
4. Press the **SLEEP** button [17]. The display shows the remaining time until standby mode begins.
5. To cancel the sleep timer, press the **SLEEP** button [17] repeatedly until the display shows "**SLEEP OFF**".
   • When the sleep timer is programed, DIMMER function does not activate.

LAST FUNCTION MEMORY

• This unit is equipped with a last function memory which stores the input and output setting conditions as they were immediately before the power is switched off.
  This function eliminates the need to perform complicated resettings when the power is turned on.

• The unit is also equipped with a back-up memory.
  This function provides approximately one week of memory storage when the main unit's power switch is off and with the mains cord disconnected.

INITIALIZATION OF THE MICROPROCESSOR

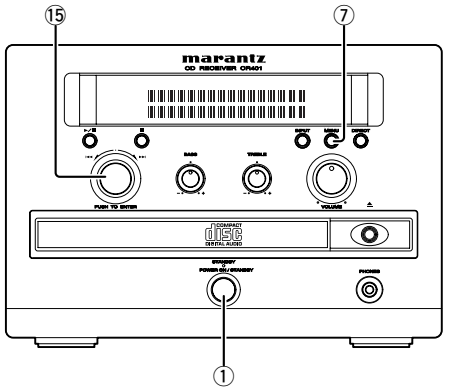
• When the indication of the display is not normal or when the operation of the unit does not shows the reasonable result, the initialization of the microprocessor is required by the following procedure.

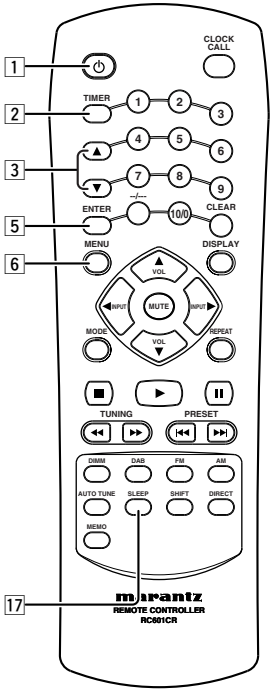
1. Unplug the mains cord from the power outlet after pressing the **POWER ON/STANDBY** switch ① or ⏻ button [1] and setting the standby mode.
2. Holding both the **MENU** button ⑦ and **POWER ON/STANDBY** switch ①, plug the mains cord into the power outlet.
3. Check that the entire display is flashing with an interval of about 1 second, and release your fingers from the 2 buttons and the microprocessor will be initialized.

Notes

• If step 3 does not work,start over from step 1.

• If the microprocessor has been initialized all the button settings are reset to the default values (the values set upon shipment from the factory).





TROUBLESHOOTING

If a problem should arise, first check the following.

1. Are the connections correct?
2. Have you operated the receiver according to the operating instructions?
3. Are the speakers and other components operating properly?

If this unit is not operating properly, check the items listed in the table below. Should the problem persist, there may be a malfunction. Disconnect the power immediately and contact your store of purchase.

Symptom	Cause	Measures	Page
Power does not turn on when POWER ON/STANDBY switch is pressed.	• Mains cord's plug is not plugged into wall outlet.	• Plug the mains cord in properly.	
There's no sound coming from the speakers?	• The speaker cables are not connected properly.	• Check the speaker connections and make sure that none of the wires are touching each other, other connectors, or any metal parts.	9
	• The volume is set at minimum.	• Turn up the volume.	11
	• The CR401 is muted.	• Unmute the CR401.	19
	• A pair of headphones is connected.	• Turn down the volume, then disconnect the headphones .	11
	• The wrong input source is selected.	• Check the input source setting.	11
	• A connecting cable may be damaged.	• Check your connecting cables for signs of damage and replace as necessary.	10
Sound is coming from only one speaker?	• The other speaker's cable is not connected properly.	• Check the speaker connections and make sure that none of the wires are touching each other, other connectors, or any metal parts.	9
Nothing happens when remote control buttons are pressed.	• Are the batteries dead?	• Replace the batteries with new ones.	4
	• Is the remote control unit too far away?	• Operate from closer to the main unit.	4
	• Is there an obstacle between the remote control unit and the main unit?	• Remove the obstacle.	4
	• You have pressed the wrong button.	• Press the desired button.	7
	• Batteries are not set in their proper direction (⊕ and ⊖).	• Set the batteries in the proper direction.	4
	• A strong light source is interfering with the CR401's remote sensor.	• Make sure that the CR401 is not subjected to direct sunshine or inverter-type fluorescent lights. Relocate if necessary.	4
Hissing noise is heard on FM broadcasts.	• Antenna cable is not properly connected.	• Connect the leads properly.	8
	• Antenna is not pointing in the right direction.	• Point the antenna in the right direction.	8
	• Radio waves are weak.	• Install an outdoor antenna.	8
Hissing or buzzing sound is heard on AM broadcasts.	• Noise from a TV or interference in the signals sent from the broadcast station.	• Turn off the TV.	8
		• Change the position of the loop antenna.	8
		• Install an outdoor antenna.	8
Booming sound (humming) is heard in AM broadcasts.	• Signals transmitted over the main cord are modulated by the power source frequency.	• Insert the plug in the opposite direction.	9
		• Install an outdoor antenna.	8
Reception is noisy, intermittent, and the ⁞⁞ ⁞⁞ indicator flickers?	• You're too far away from the transmitter. Or, your FM antenna is in the wrong position or pointing in the wrong direction. Or, the station's signal strength is poor.	• Switch the FM Mode to Mono.	15
		• Adjust the position, height, and direction of your FM antenna.	8
		• Install an outdoor FM antenna, preferably one with many elements. Installing an outdoor antenna is a specialist's job, so contact your nearest dealer for advice.	8
The radio presets no longer work?	• The power cord has not been connected to a wall outlet, or the power has been turned off for an extended period.	• Preset your favourite radio stations again. The power cord must be plugged into a wall outlet a few times each month in order to preserve the presets.	16
The RDS (Radio Data System) doesn't seem to work?	• The current FM station does not support RDS.	• Tune into a station that supports RDS.	17
	• The signal strength is poor, or there's too much interference.	• Install an outdoor FM antenna, change the position or direction of your outdoor FM antenna, and keep it away from fluorescent lights.	8
CD playback skips?	• The CR401 is subject to vibration.	• Install the CR401 somewhere free of vibration.	2
	• The disc is dirty.	• Remove the disc and clean it.	3
	• The disc is very scratched.	• Buy a new disc.	3
Noise is generated.	• DTS CD is being replayed.	• Do not replay DTS CD, which is not supported by the CR401.	2

Symptom	Cause	Measures	Page
Can't play a CD?	• The disc is upside down.	• Load the disc with the label-side facing up.	12
	• The disc is dirty.	• Remove the disc and clean it.	3
	• Condensation has formed inside the CR401.	• Remove the disc and leave the CR401 turned on for several hours until the condensation has evaporated.	2
	• The CD-R/RW disc is nonstandard.	• See "Disc Notes".	2
It takes a long time to read CD/MP3.	• It may take a longer time to read CD/MP3 with many track numbers.	• This is not a malfunction.	2
It takes a long time to locate certain tracks.	• The disc is dirty. • The disc is very scratched.	• Remove the disc and clean it. • Buy a new disc.	3 2
The clock is wrong?	• CT (Clock Time) information has been taken from a radio station in another time zone.	• Set the clock by Manual operation.	19
No sound is output when a timed playback or recording task starts?	• While a timed recording task is in progress, the output of the CR401 is muted.	• To hear what's being recorded, press the **MUTE** button to cancel the Mute function. Press it again to mute the CR401.	19
	• For timed playback, the volume is determined by the **VOLUME** control.	• Set the volume to a suitable level.	11
Standby indicator flashes.	• The protection circuit may be activated.	• Make sure not to short-circuit the positive and negative speaker wires.	9

Abnormal Behavior:
The CR401 contains a microcomputer for signal processing and control functions. In very rare situations, severe interference, noise from an external source, or static electricity may cause it to lockup. In the unlikely even that this should happen, unplug the power cord from the wall outlet, wait at least five seconds, and then plug it back in again.

SPECIFICATIONS & DIMENSIONAL DRAWINGS

AMP

Power Output .....30 W + 30 W (6 Ω THD=10%)
THD (Total Harmonic Distortion)
.....0.22% (15 W output 6 Ω)
Input Sensitivity and Impedance.....200 mV
Frequency Response
.....20 Hz-90 kHz/(–3 dB /Line)
Tone Control..... +8 dB, –8 dB, 100 Hz – 10 kHz
Speaker Impedance ..... 6–8 Ω

FM

Tuning Frequency Range
.....87.5–108 MHz 50 kHz step
Usable Sensitivity .....2.2 µV (75ΩIHF)
S/N Ratio.....Stereo 68 dB (IHF-A)
.....Mono 69 dB (IHF-A)
THD (Total Harmonic Distortion)
.....Stereo 0.3% (1 kHz)
.....Mono 0.2% (1 kHz)
Frequency Response
.....30 Hz–15 kHz/+1.5 dB, –1.5 dB
Stereo Separation ..... 40 dB (1 kHz)

AM

Tuning Frequency Range
..... 522–1611 kHz 9kHz step
Usable Sensitivity ..... 320 µV
S/N Ratio ..... 45 dB
THD (Total Harmonic Distortion) 1.00%

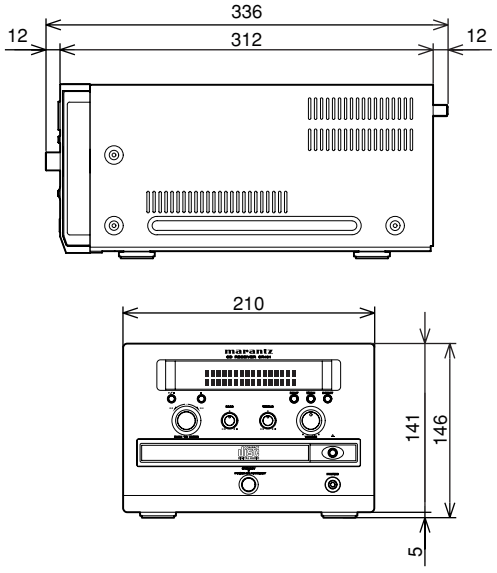
CD

Frequency Response .....20 Hz–20 kHz (±1 dB)
Audio Dynamic Range.....93 dB
THD (Total Harmonic Distortion) 0.01%
Wow and Flutter
.....Below threshold of measurability
Audio Output/Impedance (Analog)
.....1.3 V (rms) /1 kΩ
S/N Ratio .....93 dB

General

Power Supply .....AC 230V, 50 Hz
Power Consumption .....74 W
Stand-by Power Consumption.....0.8 W
Dimensions (W x H x D)
.....210 W x 146 H x 336 D mm
Weight .....5.7 kg

* Specifications subject to change without prior notice.



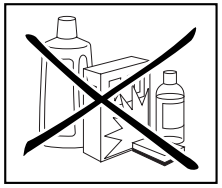
OTHERS

The section describes the care and maintenance tasks that must be performed to optimize the operation of your Marantz equipment.

■ Cleaning of equipment external surfaces

The exterior finish of your unit will last indefinitely with proper care and cleaning, Never use scouring pads, steel wool, scourging powders or harsh chemical agents (e.g., lye solution), alcohol, thinner, benzine, insecticide or other volatile substances as these wil mar the finish of the equipment. Likewise, never use cloths containing chemical substances. If the equipment get dirty, wipe the external surfaces with a soft, lint-free cloth.
If the equipment becomes heavily soiled:

- dilute some washing up liquid in water, in a ratio of one part detergent to six parts water.
- dip a soft, lint-free cloth in the solution and wring the cloth till it is damp.
- wipe the equipment with the damp cloth.
- dry the equipment by wiping it with a dry cloth.



■ Repairs

Only the most competent and qualified service technicians should be allowed to service the factory-trained warranty station personnel have the knowledge and special facilities needed for repair and calibration of this precision equipment. After the warranty period has expired, repairs will be performed for a charge if the equipment can be returned to normal operation.
In the event of difficulty, refer to your dealer or write directly to the nearest location to you that is listed on the Marantz Authorized Service Station list. If writing, please include the model and serial number of the equipment together with a full description of what you think is abnormal about the equipment's behaviour.

www.marantz.com

You can find your nearest authorized distributor or dealer on our website.

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